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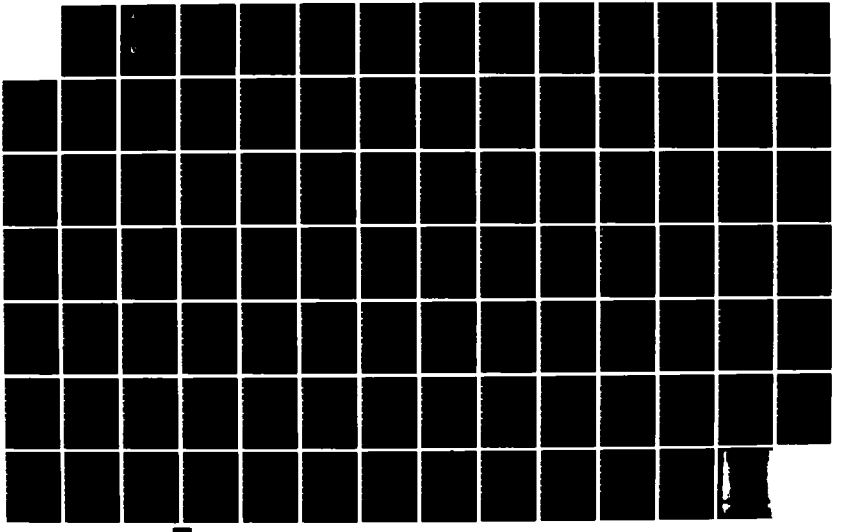

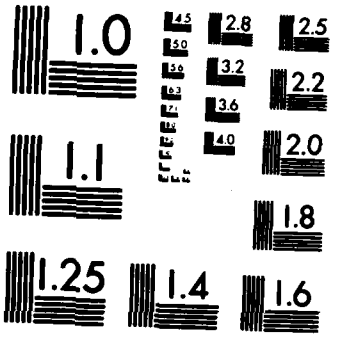

TECHNICAL REPORT RR-84-1

JOINT PROBABILITY OF SELECTED CLOUD AND VISIBILITY THRESHOLDS AROUND FRANKFURT, GERMANY

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NOVEMBER 1983

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The areal probabilities of adverse weather at a station network consisting of Heidelberg, Frankfurt, Hahn, and Saarbrucken have been determined for the period of record 1967 through 1976. Eight categories of adverse weather conditions are specified in the report on the basis of visibility and ceiling observations alone. The probabilities of simultaneous occurrence of adverse weather for all possible combinations of two, three, and four stations, as well for each individual station, have been tabulated for eight different observation times (spaced three hours apart).

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Detailed probabilities are given for various combinations of conditions. For the particular condition of ceiling less than 2000 feet and/or visibility less than four miles at 0700 Local Standard Time (LST), the probability estimates at single stations range from 31 to 52 percent in fall, 34 to 63 percent in winter, and 17 to 28 percent in summer. The three-station probabilities for the same adverse weather category and observation time for fall, winter, and summer are reduced to 26 to 37 percent, 31 to 44 percent, and 12 to 17 percent, respectively. The four-station probabilities are further lowered to 25 percent in fall, 29 percent in winter, and 11 percent in summer. This tendency is valid for all categories.

For ceiling less than 500 feet and/or visibility of two miles or less, the single-station probabilities (all hours considered) range from 14 to 48 percent for winter, 8 to 39 percent in fall, and 1 to 20 percent in summer. The simultaneous probabilities for all four stations at the best and worst hours display only 4 to 14 percent, 2 to 12 percent, and 0 to 10 percent for winter, fall, and summer, respectively.

Tabulations are included for all grouped data, stratified according to season and month.

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I. INTRODUCTION

In a previous study [1], as expected, the simultaneous occurrence of adverse weather at several stations was found to be less than that at a single station, where the decrease of probability depends on the size of the area and the local climatic conditions. In the present study, the spatial variability of visibility and cloud ceiling in Central Europe has been examined for the period of record 1967 through 1976. The empirical probabilities of occurrence at four single stations and at two through four stations simultaneously (joint probabilities) have been generated for the following eight categories (eight different observation times, spaced three hours apart):

a. Visibility $\leq$ 1 km

b. Ceiling $\leq$ 500 ft

c. Ceiling $\leq$ 500 ft and/or visibility $\leq$ 2 mi

d. Ceiling $\leq$ 800 ft

e. Ceiling $\leq$ 800 ft and/or visibility $\leq$ 3 mi

f. Ceiling $\leq$ 2000 ft and/or visibility $\leq$ 3 mi

g. Ceiling $\leq$ 4500 ft and/or visibility $\leq$ 4 mi

h. Ceiling $\leq$ 8000 ft and/or visibility $\leq$ 5 mi

Condition (a) shows the lowest probabilities as expected, followed by condition (b), etc., with the exception of condition (d), whose probabilities generally fell between those associated with conditions (b) and (c).

Serially complete data sets consisting of ceiling and visibility observations every three hours at Heidelberg, Frankfurt, Hahn, and Saarbrucken were produced to perform the areal probability calculations. The data set for Sembach and Bitburg showed too many data gaps, especially intermittent observations at night. Therefore, it was impractical to establish a homogeneous and serially complete data set of value for this areal study, although the data were sufficient to permit a comparison of visibilities for the standard period 1966-76 and data collections prior to 1970.

Figure 1 provides a map depicting the area of interest and location of observation stations.

II. PERIOD OF RECORD

Before the results of the primary study are discussed, a brief digression may be in order to investigate how the results may be affected by the chosen period of record or any possible climatic trend. Some may believe that a standard period of record such as 1966 to 1975 is absolutely necessary for conclusions about adverse weather to guarantee an unbiased comparison. Others may think that the most recent data (e.g., 1973-83) may be better than the data utilized in our report. However, if the standard period conclusions are

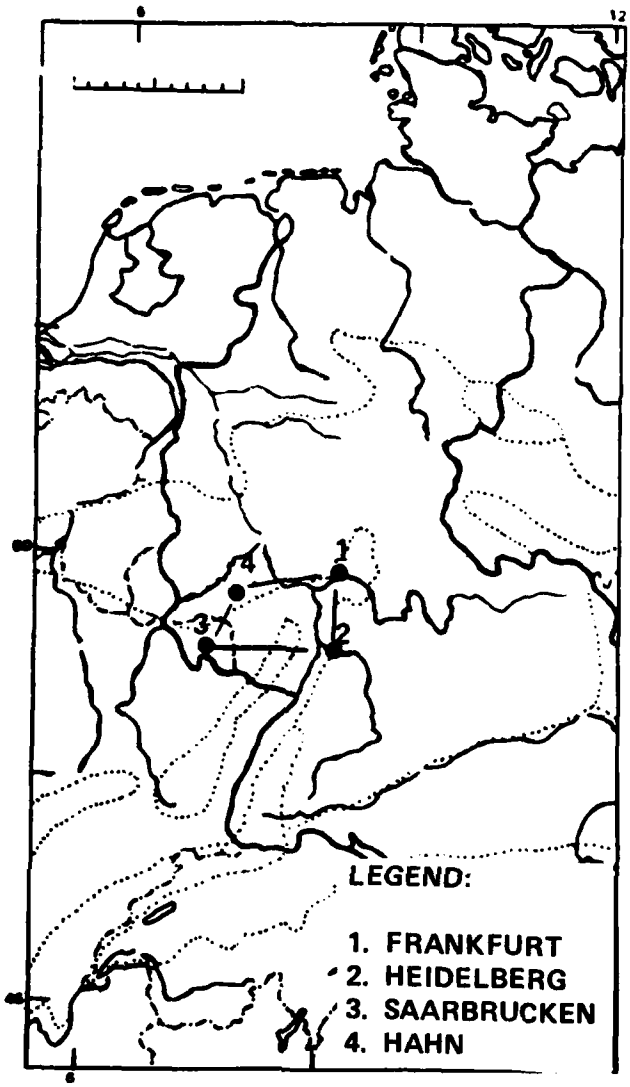

Figure 1. Location of stations.

preempted, these assumptions cannot be supported. Earlier data tend to show a slightly higher probability of adverse weather than most recent data if data from bigger cities are being used. Otherwise, the periods of record do not significantly bias the estimates, although a slight tendency for lower cases of adverse weather in the decade 1966-75 compared to records earlier than 1970 exists.

For convenience of data processing, the class boundaries were chosen as reported in the synoptic code for visibility observations in statute miles and kilometers during the earlier and later periods, respectively.

As a first check, we may compare the results for Bitburg and Frankfurt for the period of record prior to 1970 with the 10-year (standard) period 1966-75 (Tables A-1 through A-4). In both cases, adverse weather probabilities are somewhat higher in the period before 1970. This finding is also supported by a comparison of the average days of fog for Berlin for the period 1950-70 with 1950-79 [1] (see Table A-5). In addition, this result was also indicated by plotting cumulative distributions of the visibility observations for the two different periods of record, and stratified according to eight-hour classes. For brevity, only early morning and evening hours are included here (Figures B-1 through B-8).

Other studies of the probability of fog at Sembach and Heidelberg (Figures B-9 through B-16) disclose the same tendency. However, the results for Hahn (Figures B-17 through B-20) appear contrary to the other four stations. This contradiction for Hahn may imply that the reduction of adverse weather in the period 1967-75 as found in our study may be an urban effect [2,4], rather than a climatic trend. Under the heat island effect, one would expect that low visibility is less frequent since the minimum temperatures are higher in the urban areas. Consequently, it may be assumed that over the rural areas no significant change may have occurred.

If a climatic trend exists, it would again be in the direction of lowering the probability of adverse weather in the 1966-75 period. If the data are utilized for an evaluation of adverse climatic conditions within a specific region, one may conclude that the data before 1970 are also representative. They may constitute a more conservative climate, however, and do not reflect the climatic trend in urban areas.

It should be noted that our data for Frankfurt contained several large gaps (on the order of two weeks) during the months September, October, November and December 1966. For this reason, we chose to delete 1966 and limit the period of record for our present study to 1967 through 1976.

III. DATA PREPARATION

All stations whose observations were used in this study displayed some inconsistent standard observation times throughout the period of record. For example, Frankfurt recorded observations once per hour, but on occasion switched to only one observation for every three hours during the earlier part of the record. The latter part of Frankfurt's record showed observations once per hour, but three observations per hour every third hour beginning at 00^h Greenwich Mean Time (GMT), e.g., at 0, 20, and 50 minutes past the hour. This problem was compounded by sporadic "special" observations, which are made

during episodes of severe weather. These special observations were not included in our data set, because they would have increased the estimates of probability of adverse weather. Homogenous sets of data were therefore created by choosing the observations closest to the whole hour in three-hour intervals, beginning at 00^h GMT (for local time, add one hour to the GMT time).

By necessity, some missing data were filled in to facilitate the joint probability calculations. This was accomplished by interpolating between the observation preceding and the observation immediately following the missing observation, provided that an observation was available no more than three hours past the missing observation time. Otherwise, persistence was assumed, e.g., the previous observation was repeated.

Two peculiarities in the interpolation process must be mentioned. The first instance concerns the case where the synoptic observation was missing (i.e., none of the atmospheric parameters were recorded) for one particular three-hourly value. Interpolation resolved that problem.

The second case was our assumption that the data were missing if a zero appeared in the data field. This postulation had to be made because our computer tapes for the 1966-76 period contained data in an integer format. These data, however, were the result of a conversion from "raw" data which were in a binary format. In this conversion (performed prior to this study) blank data fields were replaced with zeros.

While zeros in the visibility are not part of the synoptic code and thus represent missing data, zero is part of the World Meteorological Organization (WMO) code in ceiling observations and indicates an extremely low ceiling (less than 30 meters). In searching through the data files, it was found that in most cases an observation of zero was often associated with very low ceiling and/or visibilities immediately before and after the missing observation time. Thus, the ambiguity imposed by our interpretation to consider zero as a missing ceiling observation did not contribute to bias adverse weather condition (b).

The total percentage of missing data that were subsequently filled in by interpolation or persistence at Frankfurt and Saarbrucken was 0.8 percent and 1.8 percent, respectively. Since about one half of all the missing data in the Frankfurt record where persistence was used were found during the months of January and March 1967, these months would show a greater statistical error than the other months. No other large gaps were encountered in the Frankfurt record. The months that contained the most missing data in the Saarbrucken record were March (three different years) and April, which accounted for one-fourth of the total number of observations filled in at this station.

Hahn and Heidelberg displayed total percentages of missing data of 4.5 percent and 9.0 percent, respectively. At Hahn, very few observations were recorded at 0, 18, or 21^h Local Standard Time (LST) during the months of May, June, and July 1970. Some deficiencies existed at other hours as well. These three months contain nearly one-third of all the missing data for this station. Except for some instances of missing observations at 0^h and 21^h LST, there were no other large data gaps in the Hahn record. Since the summer months have lower probabilities of adverse weather, the effect of the fill-in procedure, if any, may be of little consequence.

The Heidelberg record consistently contained deficiencies in the 0^h LST and 21^h LST observations. The criteria of 5 to 13 missing observations per month at either 0^h LST or 21^h LST were met at least once each month January through September. February (for three different years) contained the greatest number of large gaps for any particular month. However, the amount of large gaps in the winter and summer months were comparable. For the fall months, persistence hardly played a role, as compared with winter, spring, and summer months. Thus, the results of our study for other than 0^h or 21^h LST were not affected by supplementing the data. In the overall evaluation, however, the climatological result even for these hours was consistent with expectations. Thus, the concern about the fill-in of data even at Heidelberg can be dismissed.

In summary, the filling in of missing data does not affect the estimation of the probabilities beyond the ordinary expectation of statistical error tolerance.

IV. SINGLE STATION SURVEY

Single station probabilities for all data grouped together are provided in Table A-6, which shows the range of probabilities encountered for the four-station network documented in this study. As noted on the tables, Heidelberg, in most instances, is the station with the lowest probabilities of occurrence of adverse weather, and Hahn is the station with the highest probability of occurrence. The exceptions are indicated by footnotes on the tables.

Tables A-7 through A-10, which summarize the adverse weather probabilities in three-hour intervals stratified by season, indicate that the lowest probabilities exist during the summer, and the highest probabilities exist during winter. Condition (a) indicates the presence of fog or the largest visibility limitation in our tabulations. The lowest probabilities at 10^h LST range from less than 1 percent in summer to 6 percent in winter, while the highest single station probabilities range from 6 percent in summer to 24 percent in winter. The corresponding range of probabilities for condition (f) at 10^h LST is 21 to 52 percent, and 39 to 78 percent for the lowest and highest probabilities, respectively.

From these tables one can readily discern a diurnal trend in the adverse weather probabilities. Although the maximum probabilities are associated with 07^h LST for the annual summary, the maximum probabilities during the winter were found at 10^h LST.

Tables A-11 through A-17 summarize the single-station probabilities for the individual months September, October, November, December, January, February, and July, respectively. The diurnal trend in adverse weather probabilities is quite evident in the monthly tabulations. November appears to be a transition month in which adverse weather conditions last longer in the morning. Thus, some of the maximum probabilities shift from 07^h LST to 10^h LST, and this trend does not reverse until February. Of the six fall and winter months, December and January have the highest adverse weather probabilities. However, these probabilities oscillate during the fall months, and October's probabilities are comparable to December and January in this respect. The lower visibilities in December and January are presumably due to a greater number of precipitation events.

V. TWO-STATION PROBABILITIES

Tabulations of the two-station probabilities on an annual (Table A-18), seasonal (Tables A-19 through A-22), and monthly (Tables A-23 through A-29) basis are provided which display the lowest and highest probabilities of each adverse weather category at the different observation times, rather than listing the probabilities associated with all six two-station combinations. The simultaneous occurrence of the same adverse weather category for the same data stratification (e.g., annual, seasonal, monthly) is, of course, less than the single-station probability, but exceeds the expected probability by assuming statistical independence, i.e., the probability obtained from the product of the two individual station probabilities.

The reduction in probabilities when considering individual stations versus simultaneous occurrences at two stations is evident for all data grouped together. For example, at 07^h LST, condition (c), the probabilities reduce from a range of 14 to 33 percent to the two-station probabilities of 8 to 18 percent. Similarly, at 16^h LST, condition (c), the corresponding probabilities are 7 to 15 percent and 3 to 7 percent. For condition (h) at 07^h LST, the respective probabilities are 67 to 79 percent, reducing to a range of 56 to 64 percent for the two-station probabilities. Typically, the "best" station combination is Heidelberg/Frankfurt, with most of the exceptions being noted for conditions (a) and (b).

Although the spatial probabilities decrease as a function of distance, orographic effects play a very important role in determing the statistics of this rather small network of stations.

During the fall the highest probabilities of adverse weather were consistently found for the station combination Hahn/Saarbrucken. The largest variation in any season in the "best" station combination (lowest probabilities of adverse weather) was found during the fall, where Heidelberg/Hahn most often replaced Frankfurt/Hahn in this role.

The largest range of probabilities within any adverse weather category during the fall and winter was obtained at 04^h LST for condition (f), in which the respective probabilities were 21 to 43 percent and 32 to 62 percent. Condition (f) qualified as the adverse weather category with the largest average range of probabilities during fall and winter, whereas condition (g) met this criteria during spring and summer.

Parallel to a discussion on single-station probabilities, the maximum two-station probabilities were at 07^h LST for all seasons except winter, in which 10^h LST was slightly favored.

VI. THREE-STATION PROBABILITIES

As anticipated, the probability of adverse weather decreases for the three-station comparison. Tabulations of the three-station probabilities are provided (Tables A-30 through A-41), where again only the lowest and highest probabilities are listed for brevity.

The further reduction in joint probabilities (on an annual basis) is 5 to 8 percent for 07^h LST condition (c), 2 to 3 percent for 16^h LST, condition (c), and 49 to 54 percent for 07^h LST condition (h).

The lowest probabilities of adverse weather were associated with Heidelberg/Frankfurt/Saarbrucken, and the highest probabilities of adverse weather were associated with Heidelberg/Hahn/Saarbrucken, with the largest number of exceptions being noted during the summer season and the month of October.

The largest average range of probabilities within any given adverse weather category was determined to be 10 percent for condition (f) during the winter. For fall, the average range of probabilities for both conditions (f) and (g) was 6 percent. The largest average range of probabilities shifted to condition (g) in the spring and condition (h) in the summer.

VII. SPATIAL PROBABILITIES

The simultaneous occurrence of adverse weather at all four stations in the selected area is naturally lower than the single-station, two-station, or three-station probabilities, and is listed in Tables A-42 through A-53. One example of the rather sharp contrast between single-station probabilities and spatial probabilities may be seen by comparing condition (g) (annual summary) at 07^{h} LST, in which the single-station probabilities range between 35 and 60 percent, but the spatial probability is less than 20 percent (overall average for the year), with the seasonal fluctuations ranging between 11 and 29 percent. The diurnal trend is still quite evident in the spatial probabilities. The range in spatial probabilities widens as the adverse weather categories become less severe, with the maximum range being noted during the fall season.

VIII. CONCLUSIONS

The enclosed tabulations provide an evaluation of the reduction in probabilities of adverse weather from a single station to the simultaneous occurrence at four stations in terms of visibility and ceiling for a small segment in Central Europe. Only four stations were included in this study. Other stations within the area of interest were found less suitable because a higher number of missing data would have to be filled in, probably affecting the estimates of adverse weather. The 10-year period of record was selected to roughly coincide with an assumed standard period 1966-75. The enclosed tabulations only show the range of probabilities.

It should be noted that the areal probabilities of five or more stations would not significantly reduce if the additional stations were chosen within the area designated by the four chosen stations. However, areal probabilities of joint occurrence of adverse weather will decrease further if other stations outside the designated area are added.

The reader must also be cautioned not to assume that these areal probabilities can easily be applied to other areas in Central Europe. Although the large scale climate in Central Europe does not vary significantly, these studies of adverse weather are influenced by the geographic conditions of the small region and cannot be extrapolated without careful analysis.

Qualified requestors may examine the complete set of computer tabulations if special arrangements are made with the authors.

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APPENDIX A

PROBABILITY OF ADVERSE WEATHER

TABLE A-1

PROBABILITY OF ADVERSE WEATHER AT BITBURG

ANNUAL SUMMARY IN PERCENT

(LOCAL STANDARD TIME)

4/1/52 - 12/31/70

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	5.5	10.1	17.2	15.1	28.8	44.4	54.1	66.2
4	8.4	12.6	23.7	18.7	38.5	55.3	64.7	76.2
7	9.7	14.2	26.0	21.7	43.5	62.9	71.5	81.1
10	5.5	10.8	17.4	17.7	30.9	51.2	66.8	75.4
13	3.0	7.1	10.8	11.9	20.2	36.3	59.3	70.2
16	2.7	6.2	10.2	10.3	19.1	32.1	50.6	65.2
19	2.9	6.9	11.3	10.4	20.5	33.1	46.2	61.5
22	3.4	7.8	12.8	12.0	22.9	36.3	47.2	60.8

TABLE A-2

PROBABILITY OF ADVERSE WEATHER AT BITBURG

ANNUAL SUMMARY IN PERCENT

(LOCAL STANDARD TIME)

1/1/66 - 8/19/75

HR	V≤1 KM	C≤500 FT	C<500 FT &/OR V≤ 2 MI	C≤800 FT	C<800 FT &/OR V≤ 3 MI	C<2000 FT &/OR V≤ 4 MI	C<4500 FT &/OR V≤ 4 MI	C<8000 FT &/OR V≤ 5 MI
1	5.4	10.0	15.8	15.0	25.1	40.6	53.1	61.9
4	8.0	12.4	20.9	18.2	32.3	50.2	61.5	70.8
7	8.9	13.6	19.8	23.8	37.7	58.7	68.7	77.4
10	5.6	10.8	16.7	16.7	28.8	49.4	64.1	72.2
13	3.5	7.0	11.3	10.4	18.2	35.1	56.4	65.3
16	2.9	6.4	9.7	9.3	16.5	30.2	48.6	59.6
19	2.9	6.5	9.8	9.0	16.4	29.7	44.7	55.2
22	3.6	7.8	11.9	11.0	18.7	32.5	45.8	55.5

TABLE A-3

PROBABILITY OF ADVERSE WEATHER AT FRANKFURT

ANNUAL SUMMARY IN PERCENT

(LOCAL STANDARD TIME)

9/1/46 - 12/31/70

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	4.0	5.1	15.7	6.7	27.5	39.4	53.2	65.2
4	5.9	6.9	21.4	8.9	36.3	50.0	63.8	74.5
7	7.4	8.3	26.6	10.8	43.1	57.1	69.7	79.0
10	4.8	6.2	18.8	8.8	32.1	44.9	62.4	71.8
13	2.7	4.0	12.3	5.9	20.9	31.2	52.5	64.5
16	2.6	3.3	11.9	4.7	19.9	28.4	45.6	58.4
19	2.3	3.3	11.3	4.8	20.8	30.3	45.5	58.4
22	3.1	3.8	13.0	5.4	23.4	33.5	47.6	61.1

TABLE A-4

PROBABILITY OF ADVERSE WEATHER AT FRANKFURT

ANNUAL SUMMARY IN PERCENT

(LOCAL STANDARD TIME)

1/1/66 - 4/1/77

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	2.3	4.3	9.7	5.9	21.0	31.6	44.0	57.5
4	3.6	5.9	13.8	7.9	29.5	41.0	53.9	67.2
7	4.4	6.6	19.2	9.0	38.0	49.1	60.1	73.6
10	3.1	4.9	13.7	7.1	29.5	39.4	51.9	64.2
13	1.6	3.1	8.7	4.8	18.7	26.8	42.1	53.5
16	1.6	2.7	8.3	4.1	17.2	23.7	36.8	47.9
19	1.3	2.7	6.9	3.8	16.7	24.3	37.4	49.3
22	1.6	3.2	7.6	4.5	17.6	26.4	38.9	52.6

TABLE A-5

AVERAGE NUMBER OF DAYS WITH FOG

(Visibility less than 1 km)

AT BERLIN

	1950 - 1970	1950 - 1979
Winter	17.2	16.5
Spring	5.0	4.3
Summer	2.2	2.1
Fall	16.0	15.2
Annual	40.3	38.1

(Source: Sieland, 1979)

TABLE A-6

SINGLE STATION PROBABILITY OF ADVERSE WEATHER

ANNUAL SUMMARY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	2.6	3.1	6.9	4.8	12.5	20.4	35.7	52.7
	8.4	16.4	22.1	20.9	29.4	44.4[2]	52.3[2]	64.7[2]
4	3.1	4.3	8.4	6.1	15.0	24.5	40.5	58.1
	10.6	19.8	26.8	25.6	36.5	53.2[2]	60.5[2]	72.0[2]
7	4.3	4.8	14.1	7.1	23.8	35.3	50.8	66.7
	13.8	23.3	32.5	30.2	43.2[2]	62.0[2]	67.9[2]	78.5[2]
10	3.1	3.8	13.9	6.7	25.0	36.4	51.2	65.2
	10.6	19.3	25.9	25.6	37.2[2]	59.3[2]	65.2[2]	74.4[2]
13	1.8	2.1	9.3	4.0	16.4[1]	27.6	44.2[1]	55.7[1]
	6.5	13.4	17.6	18.4	23.9	45.3[2]	57.9[2]	65.9[2]
16	1.6	1.8	7.4	2.9	13.5	21.5	36.0[1]	47.8[1]
	5.8	11.4	15.0	15.2	21.0	34.8[2]	48.7	57.2
19	1.5	1.8	6.5	3.2	12.2	19.7	34.9	49.5[1]
	5.6	11.5	16.0	15.5	22.6	34.4[2]	44.8[2]	55.7
22	1.9	2.7	6.6	4.1	11.7	19.3	34.2	51.2
	6.7	13.6	18.0	17.5	25.1	38.6[2]	48.7[2]	60.8[2]

1. Frankfurt was the "best" station instead of Heidelberg.
2. Saarbrucken was the "worst" station instead of Hahn.

TABLE A-7

SINGLE STATION PROBABILITY OF ADVERSE WEATHER

FOR SEP-OCT-NOV IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	4.4[1]	5.6	9.3	7.6	16.7	24.5	40.2	57.4
	10.7	18.9	26.3	23.4	34.6[2]	52.1[2]	60.0[2]	73.3[2]
4	6.2	7.6	12.2	9.6	20.4	28.2	46.3	63.0
	13.9	23.7	34.1	29.7	44.0	60.7[2]	68.7[2]	79.6[2]
7	9.2	8.9	20.6	11.7	31.0	42.0	58.9	74.0
	19.2	27.4	38.5	34.4	54.2[2]	72.0[2]	78.9[2]	86.2[2]
10	5.9	6.7	18.6	10.1	30.3	42.8	57.7	69.9
	13.7	23.2	32.3[2]	30.8	48.7[2]	69.8[2]	74.4[2]	83.1[2]
13	2.6	3.6	11.7	5.3	20.3	32.0	49.9	61.7[1]
	6.6	14.2	17.2	20.4	25.3	50.9[2]	59.9[2]	69.2[2]
16	2.2[3]	2.5	9.5	4.0	16.4[1]	25.3	39.8[1]	52.2[1]
	5.6	11.9	14.7	16.8	21.5	37.6[2]	49.6[2]	59.2[4]
19	2.3[1]	3.2	8.2	4.7	15.5	22.8	37.9	54.5
	6.5	12.8	17.0	16.3	24.5	38.4[2]	51.3[2]	62.8[2]
22	3.2[1]	5.2	8.8	6.4	15.0	23.3	37.4	55.3
	8.2	14.2	19.6	17.5	27.0	42.2[2]	54.3[2]	67.9[2]

1) Frankfurt was the "best" station instead of Heidelberg.

2) Saarbrucken was the "worst" station instead of Hahn.

3) Saarbrucken was the "best" station instead of Heidelberg.

4) Heidelberg was the "worst" station instead of Hahn.

TABLE A-8

SINGLE STATION PROBABILITY OF ADVERSE WEATHER

FOR DEC-JAN-FEB IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	2.9[1]	5.6	14.2	10.0	25.1	39.8	60.1	72.6
	18.7	32.2	42.0	39.7	53.4	70.0[2]	77.9	84.4[2]
4	3.4[1]	7.4	15.2	10.8	24.9	41.2	62.2	75.6
	20.4	34.8	44.0	43.3	56.3	73.1	80.8	87.1[2]
7	4.6[1]	7.7	16.7	11.9	26.6	43.4	66.4	78.9
	21.9	35.8	46.3	45.1	58.3	75.7[2]	83.1	87.2[2]
10	6.0	7.0	24.0	12.8	37.8	52.0	68.9	82.1
	23.6	35.6	48.2	43.7	59.6	77.7[2]	82.3[2]	89.9[2]
13	4.1[1]	4.8	19.9	9.2	31.9	48.3	66.3	78.4
	17.2	30.2	40.9	37.9	49.9	73.1[2]	78.1[2]	86.8[2]
16	3.8	4.3	17.0	6.4	28.2	41.9	61.8	74.9
	16.2	27.2	36.7	34.0	46.1	65.2	73.2	78.9
19	2.2[1]	3.8	14.6	7.1	24.8	39.6	59.8	73.2
	14.4	27.4	36.9	35.3	48.0	65.4[2]	73.6	82.3
22	2.6	4.9	14.4	9.0	24.6	38.4	59.3	72.3
	16.6	29.8	38.8	37.1	50.0	67.3	75.0	83.0[2]

1) Frankfurt was the "best" station instead of Heidelberg.

2) Saarbrucken was the "worst" station instead of Hahn.

TABLE A-9

SINGLE STATION PROBABILITY OF ADVERSE WEATHER

FOR MAR-APR-MAY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.1	0.8	2.0	1.2	4.2	9.7	24.8	44.8
	2.7	8.8	12.1	13.0	18.6	32.4	42.5	55.8[2]
4	0.7	1.2	2.8	2.1	6.6	13.4	28.2	49.0
	5.1	12.3	16.5	17.1	24.2	39.1[2]	48.8	62.2[2]
7	1.0	1.1	9.1	2.4	18.5	28.2	41.3	58.5
	8.2	17.3	25.3	23.3	35.3	53.6	60.2[2]	73.0[2]
10	0.3[1]	0.5	5.5[1]	1.9	14.5[1]	27.3	42.8	57.5
	4.1	11.3	15.5	16.7	25.9[2]	51.1[2]	57.9[2]	68.4[2]
13	0.0[1]	0.2	2.7[1]	1.3	6.6[1]	14.5[1]	34.9[1]	46.5[1]
	1.9	5.3	7.7	9.6	13.5	35.1[2]	53.9[2]	59.4[2]
16	0.1	0.2	2.2[1]	0.8	3.9[1]	9.7[1]	24.2[1]	36.0
	1.4	4.2	5.5	6.8	10.7	24.4[2]	41.5[2]	49.7
19	0.0	0.2	2.3	0.9	5.5	10.9	24.8[1]	37.3[1]
	1.4[2]	4.0	6.7	7.1	11.6	23.3	36.0	47.9
22	0.0	0.4	1.9	0.7	3.9	9.1	23.5	41.5[1]
	1.5[2]	6.9	8.6	10.4	14.9	27.0	38.5[2]	51.0[2]

1) Frankfurt was the "best" station instead of Heidelberg.

2) Saarbrucken was the "worst" station instead of Hahn.

TABLE A-10

SINGLE STATION PROBABILITY OF ADVERSE WEATHER
FOR JUN-JUL-AUG IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.1[1]	0.7	2.0	0.7	4.4	7.9	17.7	36.5
	1.7	5.9	8.0	8.0	12.9[2]	24.8[2]	28.8[2]	45.9[2]
4	1.0	1.1	3.4	2.0	8.4	15.4	25.3	45.1
	4.2[2]	8.6	12.6	12.7	23.6[2]	38.8[2]	43.7[2]	59.6[2]
7	1.2[1]	1.7	10.0	2.4[1]	19.1	27.7	38.6	55.9
	6.4[2]	13.2	19.9	18.5	32.8[2]	47.2[2]	49.4[2]	67.7[2]
10	0.2	0.9	2.3[1]	1.5[1]	8.7[1]	21.3[1]	35.4	47.4[1]
	1.5[2]	7.5	9.0	11.9	17.4[2]	39.4[2]	46.2[2]	56.9[2]
13	0.0	0.1	2.9[1]	0.2[1]	2.7[1]	8.2[1]	25.7[1]	34.0[1]
	0.5	4.2	4.6	6.3	7.5	22.6[2]	39.7[2]	48.7[2]
16	0.0	0.1	0.9[1]	0.3	1.7[1]	4.9[1]	18.2[1]	26.6[1]
	0.3	2.5	3.1	3.8	6.3	13.8[2]	30.5	44.1
19	0.0	0.1[1]	0.9	0.1[1]	2.9[1]	6.0	17.1	26.1[1]
	0.5	2.2	3.4	3.8	6.7	11.9[2]	18.3[2]	36.3
22	0.0	.3	1.3[1]	0.4[1]	2.4	6.4[1]	16.6	30.9[1]
	1.1	3.9	5.0	5.3	9.0	20.1[2]	27.0[2]	41.9[2]

1) Frankfurt was the "best" station instead of Heidelberg.

2) Saarbrucken was the "worst" station instead of Hahn.

TABLE A-11

SINGLE STATION PROBABILITY OF ADVERSE WEATHER

FOR SEPTEMBER IN PERCENT

(LOCAL STANDARD TIME)

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.7	0.0	3.3	0.3	6.7	11.3	20.7	41.0
	3.3	6.3	12.3[2]	10.0	21.3[2]	28.7	44.3[2]	63.3[2]
4	3.0	2.0	7.0	2.3	13.7	20.7	30.0	51.0
	7.7	11.0	22.0	14.3	32.0[2]	51.0[2]	56.0[2]	69.7[2]
7	8.3[1]	5.3	23.0	5.7	33.3	40.3	48.0	63.7[5]
	15.0	16.0	34.0[4]	19.0	52.3[2]	68.3	73.0[2]	79.7[2]
10	1.7	2.7	13.0	4.3	23.3[5]	35.0	45.7	56.7[5]
	5.0	10.7	19.3[2]	18.7[2]	37.7[2]	60.0	63.3[2]	74.7[2]
13	0.3	0.3	2.0[1]	0.3	9.0[5]	18.0	31.3[1]	46.0[1]
	0.7	3.7	6.3[3]	5.7	11.3[6]	33.3[2]	45.3[2]	55.3[2]
16	0.3	0.0	1.7[1]	0.7	3.7[1]	8.3[1]	18.3[1]	31.7[1]
	0.7[3]	3.0	4.3	3.7	7.0	19.7[2]	34.0[2]	46.3[2]
19	0.0	0.0	2.3[1]	0.3	5.7	7.7	18.3	38.0
	1.3	2.3	6.0	3.7	10.3	19.7[2]	28.7	45.7
22	0.0	0.3	1.7[1]	0.7[1]	3.7	7.3	16.7	36.0
	1.7	4.0	7.3	5.0	13.7	28.0[2]	33.0	52.0[2]

1) Frankfurt was the "best" station instead of Heidelberg.
2) Saarbrucken was the "worst" station instead of Hahn.
3) Heidelberg was the "worst" station.
4) Frankfurt was the "worst" station.
5) Hahn was the "best" station.
6) Heidelberg was the "worst" station.

TABLE A-10

SINGLE STATION PROBABILITY OF ADVERSE WEATHER
FOR JUN-JUL-AUG IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.1[1]	0.7	2.0	0.7	4.4	7.9	17.7	36.5
	1.7	5.9	8.0	8.0	12.9[2]	24.8[2]	28.8[2]	45.9[2]
4	1.0	1.1	3.4	2.0	8.4	15.4	25.3	45.1
	4.2[2]	8.6	12.6	12.7	23.6[2]	38.8[2]	43.7[2]	59.6[2]
7	1.2[1]	1.7	10.0	2.4[1]	19.1	27.7	38.6	55.9
	6.4[2]	13.2	19.9	18.5	32.8[2]	47.2[2]	49.4[2]	67.7[2]
10	0.2	0.9	2.3[1]	1.5[1]	8.7[1]	21.3[1]	35.4	47.4[1]
	1.5[2]	7.5	9.0	11.9	17.4[2]	39.4[2]	46.2[2]	56.9[2]
13	0.0	0.1	2.9[1]	0.2[1]	2.7[1]	8.2[1]	25.7[1]	34.0[1]
	0.5	4.2	4.6	6.3	7.5	22.6[2]	39.7[2]	48.7[2]
16	0.0	0.1	0.9[1]	0.3	1.7[1]	4.9[1]	18.2[1]	26.6[1]
	0.3	2.5	3.1	3.8	6.3	13.8[2]	30.5	44.1
19	0.0	0.1[1]	0.9	0.1[1]	2.9[1]	6.0	17.1	26.1[1]
	0.5	2.2	3.4	3.8	6.7	11.9[2]	18.3[2]	36.3
22	0.0	.3	1.3[1]	0.4[1]	2.4	6.4[1]	16.6	30.9[1]
	1.1	3.9	5.0	5.3	9.0	20.1[2]	27.0[2]	41.9[2]

1) Frankfurt was the "best" station instead of Heidelberg.

2) Saarbrucken was the "worst" station instead of Hahn.

TABLE A-11

SINGLE STATION PROBABILITY OF ADVERSE WEATHER

FOR SEPTEMBER IN PERCENT

(LOCAL STANDARD TIME)

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.7	0.0	3.3	0.3	6.7	11.3	20.7	41.0
	3.3	6.3	12.3[2]	10.0	21.3[2]	28.7	44.3[2]	63.3[4]
4	3.0	2.0	7.0	2.3	13.7	20.7	30.0	51.0
	7.7	11.0	22.0	14.3	32.0[4]	51.0[4]	56.0[2]	69.7[2]
7	8.3[1]	5.3	23.0	5.7	33.3	40.3	48.0	63.7[5]
	15.0	16.0	34.0[6]	19.0	52.3[4]	68.3	73.0[2]	79.7[2]
10	1.7	2.7	13.0	4.3	23.3[5]	35.0	45.7	56.7[5]
	5.0	10.7	19.3[2]	18.7[2]	37.7[2]	60.0	63.3[4]	74.7[2]
13	0.3	0.3	2.0[1]	0.3	9.0[4]	18.0	31.3[1]	46.0[1]
	0.7	3.7	6.3[3]	5.7	11.3[4]	33.3[4]	45.3[2]	55.3[2]
16	0.3	0.0	1.7[1]	0.7	3.7[1]	8.3[1]	18.3[1]	31.7[1]
	0.7[3]	3.0	4.3	3.7	7.0	19.7[2]	34.0[2]	46.3[2]
19	0.0	0.0	2.3[1]	0.3	5.7	7.7	18.3	38.0
	1.3	2.3	6.0	3.7	10.3	19.7[2]	28.7	45.7
22	0.0	0.3	1.7[1]	0.7[1]	3.7	7.3	16.7	36.0
	1.7	4.0	7.3	5.0	13.7	28.0[2]	33.0	52.0[2]

1) Frankfurt was the "best" station instead of Heidelberg.
2) Saarbrucken was the "worst" station instead of Hahn.
3) Heidelberg was the "worst" station.
4) Frankfurt was the "worst" station.
5) Hahn was the "best" station.
6) Heidelberg was the "worst" station.

TABLE A-12

SINGLE STATION PROBABILITY OF ADVERSE WEATHER

FOR OCTOBER IN PERCENT

(LOCAL STANDARD TIME)

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	8.4	7.4	12.3	8.4[1]	21.6	29.4	44.2	60.7
	15.2	24.2	33.2	28.4	41.6[2]	59.4[2]	64.2	74.8[2]
4	9.0	11.0	15.2	13.6[1]	25.5	32.3	50.7	66.8
	15.8[2]	29.0	39.7	35.5	49.7	66.8[2]	72.3[2]	82.6[2]
7	12.6	11.6	24.2	15.5	33.2	47.4	64.8	76.1
	24.5	32.6	44.2	40.0	58.1[2]	76.8	81.0[2]	89.4[2]
10	10.0	9.7	20.3	13.2	32.6	44.5	60.0	70.0
	16.8[2]	28.7	37.1	37.1	52.9[2]	72.9	78.1	86.1[2]
13	2.6	5.2	12.6	7.1	21.6	34.5	51.3	63.9[1]
	7.4	16.1	19.4	22.6	28.7	53.9	61.3[2]	70.0
16	1.3[1]	3.2	10.3	5.2	17.1[1]	27.1[1]	40.0	54.2
	5.8	12.9	15.5	17.7	22.3	39.7	52.3	61.3[3]
19	2.3	4.2	10.0	5.5	19.4	28.4	41.6	57.4
	6.8	15.8	19.4	19.7	28.1	43.9	56.1	69.0[2]
22	3.6[4]	6.8	12.6	7.1	18.7	27.7	40.7	60.3
	8.7	17.1	21.9	21.3	31.3	48.1[2]	60.3	73.2[2]

1) Frankfurt was the "best" station instead of Heidelberg.

2) Saarbrucken was the "worst" station instead of Hahn.

3) Heidelberg was the "worst" station instead of Hahn.

4) Saarbrucken was the "best" station instead of Heidelberg.

TABLE A-13

SINGLE STATION PROBABILITY OF ADVERSE WEATHER

FOR NOVEMBER IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	6.7	9.3	12.3	12.7[1]	21.7	32.7	55.7	70.3
	13.3	26.0	33.7	31.7	41.7	58.3	71.3[2]	81.7[2]
4	6.3	9.7	14.3	12.0	22.0	31.7	58.0	71.0
	18.3	31.0	40.3	39.0	51.7	64.0[3]	78.7	86.3[2]
7	6.3	9.7	14.3	13.7	26.3	38.0	63.7	79.0
	18.0	33.3	41.7	44.0	55.0	71.0	82.3[2]	89.3[2]
10	6.0	7.7	22.3	12.7	33.7	48.7	67.3	77.7
	20.3	30.0	40.7[2]	39.7	54.7[2]	76.3[2]	81.7[2]	88.3[2]
13	5.0	5.3	16.0	8.3	28.0	43.0	63.0	75.0
	11.7	22.7	26.7	33.0	38.0	65.3[2]	73.0[2]	82.3[2]
16	4.3	4.3	14.7	6.0	25.0	38.3	58.7	73.7[4]
	10.7	19.7	24.3	29.0	35.3	54.3	66.0	69.7[3]
19	4.3[1]	5.3	11.3	8.3	21.3	32.0	53.7	67.7
	11.3	20.0	25.7	25.3	35.0	53.7[2]	68.7[2]	76.0[2]
22	4.3[1]	8.3	12.0	12.0	23.0	35.3	56.7	71.0
	15.3	22.7	30.7	27.3	38.3	52.3	70.3[2]	79.7[2]

1) Frankfurt was the "best" station instead of Heidelberg.

2) Saarbrucken was the "worst" station instead of Hahn.

3) Saarbrucken was the "best" station instead of Heidelberg.

4) Heidelberg was the "worst" station instead of Hahn.

TABLE A-14

SINGLE STATION PROBABILITIES OF ADVERSE WEATHER

FOR DECEMBER IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	2.9	8.7	16.1	13.6	21.7	44.5	66.1	77.4
	22.3	40.0	47.4	48.7	41.7	74.5	82.3	86.1[2]
4	2.9	9.0[1]	15.8	14.5	22.0	45.2	67.7	79.7
	24.2	41.0	46.8	49.7	51.7	75.8	84.5	88.1
7	4.2	11.3	17.7	15.5	26.3	50.3	71.6	82.9
	25.2	37.1	46.4	46.8	55.0	78.1	86.1	87.7
10	5.8	9.4	25.8	16.5	33.7	55.8	73.2	84.8
	25.2	40.3	49.4	49.4	54.7	77.1[2]	82.3	89.4[2]
13	4.2	7.1	21.9	13.6	28.0	53.9	68.4	80.7
	19.7	34.5	42.6	43.2	38.0	73.9[2]	77.7	85.5[2]
16	3.9	5.5	18.4	8.7	25.0	46.5	64.8	77.7
	22.9	34.8	41.0	42.3	35.3	71.9	79.7	82.6
19	2.6	4.8	13.9	9.7	21.3	44.5	65.2	74.8
	19.7	34.2	41.3	42.6	35.0	69.7	76.8	83.6[2]
22	2.3	6.8	15.8[1]	12.3	23.0	46.1	66.5	76.5
	22.6	37.7	44.8	45.8	38.3	73.6	80.0	84.5[2]

1) Frankfurt "best" station instead of Heidelberg.

2) Saarbrucken "worst" station instead of Hahn.

TABLE A-15

SINGLE STATION PROBABILITIES OF ADVERSE WEATHER

FOR JANUARY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	2.9[1]	5.5	16.5	10.3	27.7	41.3	61.3	72.3
	21.0	33.9	45.5	43.2	59.0	75.5	82.9	86.8
4	4.5	6.7	16.2	10.7	26.8	42.6	62.9	75.2
	22.3	39.0	49.7	47.4	61.9	78.1	83.9	90.7[2]
7	6.1	6.5	17.1	11.6	26.5	42.9	67.7	79.4
	24.2	41.6	51.6	49.4	62.9	80.7	86.1[2]	91.0[2]
10	7.1	6.5	23.6	11.3	36.5	53.2	70.3	82.3
	28.4	41.9	56.5	48.7	65.2	80.3	85.5	90.7
13	5.5	4.8	19.4	8.4	30.0	48.4	69.7	79.4
	20.3	33.2	45.2	40.7	54.2	77.1	81.3[2]	88.4
16	5.8	5.2	17.7	6.5	29.0	43.2	64.8	76.8
	17.1	29.0	42.9	35.8	50.0	71.6	78.7	84.5
19	2.9[1]	4.8	16.5	6.5	22.9	38.7	61.3	76.1
	13.9	30.7	41.0	38.4	51.3	71.0	79.0	86.1[2]
22	3.2[1]	4.8	16.1	7.4	23.6	35.5	56.8	71.3
	15.8	29.7	40.7	39.0	53.9	71.9	79.0	85.8[2]

1) Frankfurt "best" station instead of Heidelberg.

2) Saarbrucken "worst" station instead of Hahn.

TABLE A-16

SINGLE-STATION PROBABILITIES OF ADVERSE WEATHER
FOR FEBRUARY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	2.1	2.1	9.6	4.6	18.2	32.9	52.1	67.5
	12.1	21.8	32.1	25.7	41.1	62.5[2]	69.3[2]	81.1[2]
4	2.9[1]	5.7	13.6	6.8	20.4	35.4	55.4	71.4
	14.3	23.2	34.6	31.8	47.9	70.7[2]	76.4[2]	85.0[2]
7	2.9[1]	5.0	15.0	8.2	23.2	36.4	59.3	73.9
	15.7	27.9	40.4	38.6	54.3	71.1[2]	77.9	84.6
10	3.2	5.0	22.5	10.4	34.6	46.4	62.5	78.9
	16.4	23.2	37.9	31.8	52.1	75.4[2]	80.7[2]	89.6[2]
13	2.5	1.8	15.0[1]	5.4	24.3[1]	42.1	60.4	75.0
	11.1	22.1	34.3	28.9	41.1	67.9[2]	75.0[2]	86.4[2]
16	1.1	2.1	12.9[1]	3.9	24.3	35.4	55.0	68.2[1]
	7.9	16.8	25.0	22.9	34.3	55.4[2]	66.1[2]	71.8[2]
19	1.1[1]	1.4	9.3[1]	5.0	22.5	35.0	52.1	68.6
	9.3	16.4	27.5	23.9	38.2	53.6[2]	66.4[2]	77.1[2]
22	1.8	2.9	9.6	4.3	17.5	32.5	52.5	67.5
	9.3	19.3	28.9	23.6	38.9	56.1	64.6[2]	78.2[2]

1) Frankfurt was the "best" station instead of Heidelberg.

2) Saarbrucken was the "worst" station instead of Hahn.

TABLE A-17

SINGLE-STATION PROBABILITIES OF ADVERSE WEATHER
FOR JULY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C<2000 FT &/OR V< 4 MI	C≤4500 FT &/OR V< 4 MI	C≤8000 FT &/OR V< 5 MI
1	0.3	1.0	1.3	1.0	3.6	5.8	14.5[1]	33.9[1]
	1.0	4.2	7.4	5.8	11.0	21.6[1]	29.4[3]	43.2[2]
4	1.3	0.7	3.2	1.0	6.8[1]	14.8	24.2	44.2[1]
	1.9[2]	6.8	12.6	10.3	21.3[2]	36.1[1]	44.2	59.4[2]
7	0.7	1.3	8.1	1.6	17.4	25.5	35.5	57.4
	4.8	12.6	18.7	17.7	29.0[2]	43.2[1]	48.4[2]	68.1[2]
10	0.0	0.7	2.3[1]	1.3	7.7[1]	19.0[1]	27.7[1]	49.0[1]
	1.0	6.8	9.0	11.3	14.8	35.2[2]	43.6[2]	58.4[2]
13	0.0	0.0	0.7	0.0	2.3[1]	5.8[1]	17.4[1]	33.6
	0.3	3.9	5.2	5.8	7.4	18.7[2]	38.4	47.4[3]
16	0.0	0.0	0.0	0.0	1.6[1]	3.6[1]	10.0[1]	25.5[1]
	0.0	2.3	3.9	3.2	5.8	11.0[2]	31.9	45.5
19	0.0	0.0	0.3	0.0	1.6	4.2	12.3[1]	24.8[1]
	0.3	1.3	2.9	2.3	5.2	8.7	20.7	36.8
22	0.0	0.3	0.3	0.3	2.5[1]	4.8[1]	11.9[1]	29.7[1]
	0.7	2.3	4.5	3.2	7.4	15.8[2]	25.8	39.0

1) Frankfurt was "best" station instead of Heidelberg.

2) Saarbrucken was "worst" station instead of Hahn.

3) Heidelberg was "worst" station instead of Hahn.

TABLE A-18

TWO-STATION PROBABILITIES OF ADVERSE WEATHER

ANNUAL SUMMARY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.6 [3]	1.3 [1]	3.7	2.4	7.3	14.2	25.8	40.8
	2.6	6.2	11.2	10.0	18.1	31.9	39.8	49.4
4	1.0	1.9 [1]	4.4	2.8	8.9	17.4	29.9	46.9
	3.5	8.1	14.9	12.4	23.5	38.2	46.7	56.9
7	1.3	2.0 [1]	7.8	3.5	15.5	26.6	39.8	56.4 [4]
	4.9	9.1	18.2	14.3	28.8	44.9	53.2	64.4 [4]
10	1.1 [1]	1.4	7.2	2.9	15.1	26.3 [1]	38.5	52.8 [4]
	3.2	8.1	14.3	13.8	24.6	41.9	49.8	59.4 [4]
13	0.4 [1]	0.8 [1]	4.2 [2]	1.7	8.8	17.6	30.7	44.2
	1.6	5.1	8.4	9.5	14.9	31.3	43.8	52.0
16	0.3 [2]	0.5 [2]	3.2 [2]	1.3	7.4 [2]	13.9	24.6	37.6
	1.4	4.1	6.6	7.0	11.8	24.2	35.3	43.3
19	0.2 [2]	0.5 [2]	3.1	1.4 [2]	6.7	14.0	24.5	37.0
	1.8	4.1	7.6	7.2	13.2	24.5	33.6	43.3
22	0.4 [2]	0.9 [2]	3.1	2.0 [2]	6.1	13.5	24.0	38.6
	2.1	5.3	9.3	7.8	14.6	27.1	36.3	46.9

1) Heidelberg/Hahn was the "best" station combination instead of Heidelberg/Frankfurt.

2) Heidelberg/Saarbrucken was the "best" station combination instead of Heidelberg/Frankfurt.

3) Frankfurt/Hahn was the "best" station combination instead of Heidelberg/Frankfurt.

4) Frankfurt/Saarbrucken was the "worst" station combination instead of Hahn/Saarbrucken.

TABLE A-19

TWO-STATION PROBABILITIES OF ADVERSE WEATHER

FOR SEP-OCT-NOV IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C<800 FT &/OR V≤ 3 MI	C<2000 FT &/OR V≤ 4 MI	C<4500 FT &/OR V≤ 4 MI	C<8000 FT &/OR V≤ 5 MI
1	1.4[3]	1.9[1]	5.4[1]	3.4[2]	10.8[1]	18.6[1]	30.8	47.8
	3.7	7.6	14.9	11.0	21.4	36.6	44.8	57.4[4]
4	2.1[3]	2.9[1]	7.8[1]	4.2[1]	14.3[1]	21.4[1]	37.1	54.2[1]
	5.5	8.5	19.3	14.0	29.2	42.9	53.7	65.2[4]
7	3.5[3]	3.4[1]	12.0[1]	5.2[2]	20.0[1]	30.8[1]	46.9[1]	62.4[1]
	7.7	11.7	23.9	16.7	35.3	51.6	61.2[4]	74.6[4]
10	2.0[3]	2.2[1]	10.0[1]	4.6[1]	19.2[1]	30.2[1]	45.0[1]	56.8[1]
	4.8	10.7	18.5	17.4	30.9	49.3	57.3	71.2[4]
13	0.4[3]	1.2[2]	4.4[1]	2.1[1]	8.9[1]	19.9[1]	35.2	47.1[3]
	1.3	5.5	8.9	9.5	14.4	33.5	44.7	54.1[4]
16	0.3[2]	0.7[1]	3.2[1]	1.7[2]	7.6[1]	16.3	26.9	39.2[3]
	1.2	3.6	6.7	6.9	11.4	24.7	36.3	45.8[4]
19	0.4[2]	0.8[2]	3.5[1]	1.9[2]	9.2[1]	17.4[1]	28.0	42.1[1]
	2.4	4.5	8.6	7.5	13.9	25.8	36.3	48.6
22	0.8[1]	1.7[2]	4.6[1]	2.3[2]	9.0	17.5[1]	27.1	43.3
	2.4	5.6	10.3	7.9	15.6	27.5	38.9	50.6

1) Heidelberg/Hahn was the "best" station combination instead of Heidelberg/Frankfurt.

2) Heidelberg/Saarbrucken was the "best" station combination instead of Heidelberg/Frankfurt.

3) Frankfurt/Hahn was the "best" station combination instead of Heidelberg/Frankfurt.

4) Frankfurt/Saarbrucken was the "worst" station combination instead of Hahn/Saarbrucken.

TABLE A-20

TWO-STATION PROBABILITIES OF ADVERSE WEATHER

FOR DEC-JAN-FEB IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.9	2.2	7.3	4.7	14.7	30.0	49.4	63.6
	6.0	14.0	23.7	21.9	37.1	59.2	69.7	74.8
4	0.7	2.8	7.3	4.8	14.7	31.8	51.1	66.6
	6.8	17.1	27.2	24.8	40.1	61.8	69.6	78.6
7	1.0	3.2	8.7	5.9	17.4	33.9	59.7	70.6
	7.8	16.4	26.9	26.2	41.8	63.3	71.8	78.8
10	1.9[1]	1.9	13.9	5.1	28.3	43.4	59.2	72.9
	7.3	17.1	29.2	26.8	45.1	63.3	70.6	78.8
13	1.2[1]	1.7[1]	10.3[2]	3.8	19.8	37.6	54.6	68.4
	4.8	13.2	21.6	22.4	34.7	59.0	66.1	75.3
16	0.9[2]	1.3[2]	8.7[2]	3.1	18.1	32.0	50.0	64.1
	4.3	11.3	17.2	18.0	29.9	51.7	61.2	68.4
19	0.3[2]	1.0[2]	7.1[2]	3.4	14.6	30.6	50.3	63.9
	4.2	10.2	18.6	17.7	31.3	53.0	62.4	71.9
22	0.6[2]	1.7[2]	6.1	4.6	13.7	29.3	48.4	62.2
	5.3	12.7	22.1	17.9	32.7	54.9	64.1	73.3

1) Heidelberg/Hahn was the "best" station combination instead of Heidelberg/Frankfurt.

2) Heidelberg/Saarbrucken was the "best" station combination instead of Heidelberg/Frankfurt.

TABLE A-21

TWO-STATION PROBABILITIES OF ADVERSE WEATHER

FOR MAR-APR-MAY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.1	0.5	0.2	1.9	5.1	15.8	31.7
	0.5	2.1	4.1	4.6	9.1	20.3	29.6	39.9
4	0.1	0.3	0.8	0.8	3.5	8.0	18.7	36.3
	0.9	4.4	7.5	6.7	13.0	26.1	35.2	47.3
7	0.1	0.2	4.2	0.7	10.7	20.5	29.5	48.4
	2.2	5.0	12.0	8.6	21.1	37.5	46.0	57.7
10	0.0	0.0	1.7 [3]	0.4	7.0 [3]	17.0	29.0	43.9
	0.5	3.2	7.2	7.0	14.8	32.9	41.4	50.4
13	0.0	0.0 [2]	0.4	0.2	2.6	7.0	21.1	35.6
	0.2	1.2	2.3	4.4	7.3	21.4	39.6	45.6
16	0.0	0.0	0.4	0.1	1.4	5.4	15.2	27.2 [1]
	0.1 [4]	1.1	1.7	2.5	4.1	14.2	27.4	35.8
19	0.0	0.0	0.2	0.0	2.2	6.3	14.1	26.5
	0.4	1.5	2.5	2.9	5.2	14.2	24.5	34.5
22	0.0	0.1	0.3	0.3	1.3	4.9	14.1	29.1
	0.4	2.2	3.2	3.6	6.4	16.5	26.4	37.1

1) Frankfurt/Saarbrucken was the "best" station combination instead of Heidelberg/Frankfurt.
2) Heidelberg/Saarbrucken was the "best" station combination instead of Heidelberg/Frankfurt.
3) Frankfurt/Hahn was the "best" station combination instead of Heidelberg/Frankfurt.
4) Frankfurt/Saarbrucken was the "worst" station combination instead of Hahn/Saarbrucken.

TABLE A-22

TWO-STATION PROBABILITIES OF ADVERSE WEATHER

FOR JUN-JUL-AUG IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.0	0.8	0.0	1.1	3.2	7.2	20.5
	0.3	1.4	2.1	2.6	5.2	12.0	15.1	27.4
4	0.0	0.1	1.4	0.3	2.9	7.8	12.7	30.5
	0.9	2.7	5.6	4.2	12.0	22.6	28.3	39.2
7	0.0	0.4	7.9	0.7	10.2	17.1	23.1	40.7
	2.1	3.4	10.0	5.8	17.5	27.8	33.8	49.5[4]
10	0.0	0.0	2.7[3]	0.5	4.2[3]	11.7	20.8	33.0[3]
	0.2	1.5	5.0	4.2	8.3	22.4	29.9	39.4
13	0.0	0.0	0.0	0.0	0.7[2]	4.5	11.9	24.5
	0.0	0.7	0.8	2.2	3.5	11.7	24.8	34.0
16	0.0	0.0	0.0	0.0	0.3	2.4	6.3	17.3[1]
	0.0	0.5	0.8	1.0	2.2	6.9	16.3	25.5
19	0.0	0.0	0.0	0.0	0.4	2.3	5.6	16.0
	0.1	0.4	0.7	0.8	2.6	5.5	11.2	18.8
22	0.0	0.1	0.1	0.1	0.5	2.4	6.4	20.0
	0.1	0.9	1.6	2.0	3.9	10.2	15.8	27.1

1) Frankfurt/Saarbrucken was the "best" station combination instead of Heidelberg/Frankfurt.

2) Heidelberg/Saarbrucken was the "best" station combination instead of Heidelberg/Frankfurt.

3) Frankfurt/Hahn was the "best" station combination instead of Heidelberg/Frankfurt.

4) Frankfurt/Saarbrucken was the "worst" station combination instead of Hahn/Saarbrucken.

TABLE A-23

TWO-STATION PROBABILITIES OF ADVERSE WEATHER

FOR SEPTEMBER IN PERCENT

(LOCAL STANDARD TIME)

1967 - 1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.0	0.3[1]	0.0	2.7[1]	6.3[1]	13.7	31.3[1]
	0.3	2.3	5.7	3.7	8.3	22.0	26.0	43.3[4]
4	0.3	0.0[3]	3.0[2]	0.0[3]	7.3[1]	12.3[1]	20.7[1]	38.7[1]
	2.0	3.3	11.3	6.3	21.0	29.7	36.3	53.0[4]
7	2.3	1.0[3]	9.7[1]	1.3[1]	14.7[1]	21.7[1]	28.3	48.0[1]
	5.0[5]	5.7	17.7	7.7	32.3[4]	48.3[4]	53.7[4]	65.3[4]
10	0.0[3]	1.3	5.7	1.7	11.0	17.0[1]	27.0[1]	41.3[1]
	0.7[5]	4.3	8.3[3]	8.7	18.7[4]	33.0[4]	40.0[4]	59.7[4]
13	0.0	0.0	0.3[2]	0.0	2.3	7.0[1]	16.3	29.7[3]
	0.0	0.7	1.3[6]	1.7	4.0[2]	15.0	27.3	35.3
16	0.0	0.0	0.3[1]	0.3	1.0[3]	3.0[3]	7.7	19.3
	0.3	0.7	1.3	1.3	3.0[2]	9.0	19.0	29.7
19	0.0	0.0	0.3	0.0	2.0	4.0[1]	8.0[1]	23.7
	0.0	0.7	2.0	1.3	3.3	9.7	14.0	29.0
22	0.0	0.0	0.3	0.3	1.0	4.3[1]	8.7	23.7
	0.0	1.0	1.7	1.3	4.0	14.7	19.7	33.3

1) Heidelberg/Hahn was the "best" station combination instead of Heidelberg/Frankfurt.

2) Heidelberg/Saarbrucken was the "best" station combination.

3) Frankfurt/Hahn was the "best" station combination.

4) Frankfurt/Saarbrucken was the "worst" station combination instead of Hahn/Saarbrucken.

5) Heidelberg/Saarbrucken was the "worst" station combination instead of Hahn/Saarbrucken.

6) Heidelberg/Frankfurt was the "worst" station combination instead of Hahn/Saarbrucken.

TABLE A-24

TWO-STATION PROBABILITIES OF ADVERSE WEATHER

FOR OCTOBER IN PERCENT

(LOCAL STANDARD TIME)

1967 - 1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	2.6[3]	2.3[2]	8.7[1]	2.9[2]	14.2	22.9	35.2	52.5
	5.8[6]	9.7	20.0	12.9	28.1	43.2	49.7	63.2[5]
4	3.2[3]	4.2[2]	11.0[1]	5.2[4]	17.7	25.5	41.9	58.7[1]
	7.1	11.0	22.9	16.1	31.6	48.1	57.4	70.3[5]
7	6.5[1]	3.9[2]	16.1[1]	6.8[1]	24.8	39.7[1]	56.5	68.1[1]
	10.7	14.8	29.0	21.9	41.0	58.7	66.1	81.3[4]
10	3.2[1]	2.3[1]	11.3[1]	4.8[1]	21.6	34.5[1]	50.3	61.6[1]
	6.8	12.6	21.6	19.7	35.5	55.8	64.5	74.2[5]
13	0.0[2]	1.6[1]	4.5[3]	2.3[1]	9.7[3]	21.6	36.8[3]	49.4[3]
	0.7[6]	5.8	10.0	9.4	16.5	36.1	46.8	56.8[7]
16	0.0[2]	0.3[2]	2.3[4]	1.0[2]	7.4	15.8	26.5[3]	38.4[3]
	0.7[6]	1.9	7.1	6.1	12.9	25.8	39.7	46.1
19	0.0[2]	0.7[2]	4.5[1]	1.6[2]	11.3[3]	21.9	32.3	45.2
	1.6	4.5	10.3	8.4	15.8	31.0	42.6	55.5
22	1.0[3]	1.6[2]	6.8[1]	1.6[2]	12.3	21.0	31.6	47.7[1]
	4.2	6.2	22.6	10.3	19.0	30.0	42.9	53.6

1) Heidelberg/Hahn "best" station combination instead of Heidelberg/Frankfurt.

2) Heidelberg/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt.

3) Frankfurt/Hahn "best" station combination instead of Heidelberg/Frankfurt.

4) Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt.

5) Frankfurt/Saarbrucken "worst" station combination instead of Hahn/Saarbrucken.

6) Heidelberg/Frankfurt "worst" station cobmination instead of Hahn/Saarbrucken.

7) Heidelberg/Saarbrucken "worst" station combination instead of Hahn/Saarbrucken.

TABLE A-25

TWO-STATION PROBABILITY OF ADVERSE WEATHER

FOR NOVEMBER IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	1.7[3]	2.7[1]	7.0[1]	5.7[1]	13.7[1]	26.0[1]	43.3	57.3
	6.0	10.7	18.7	16.3	27.7	44.3	58.7	68.7
4	2.0[1]	2.7[1]	8.7[1]	4.3[1]	15.7[1]	25.3[1]	47.0	62.0
	7.3	11.0	23.7	19.3	35.0	50.7	67.3	74.3
7	2.0[3]	5.0[1]	10.0[1]	6.3[2]	20.0[1]	30.7[1]	53.0	70.0
	8.0	14.3	24.7	20.3	37.7	56.0	69.7	77.7
10	2.0[3]	3.0[1]	12.7[1]	6.3	24.3[1]	39.0[1]	57.3[1]	67.3
	7.7	15.0	25.3	23.7	39.0	61.0	70.3	79.7[5]
13	0.7[3]	1.7[2]	7.0[1]	3.7[1]	13.7[1]	31.0[1]	52.0[1]	62.3[3]
	3.7	10.0	16.0	17.3	23.3	49.3	60.0	68.7
16	0.7[1]	1.3[1]	6.0[2]	3.0[1]	13.0[1]	27.0	44.0	55.0[4]
	3.7	8.3	11.7	13.3	18.7	39.3	50.0	60.0
19	1.3[1]	1.7[2]	5.0[1]	4.0[2]	12.7[1]	23.7[1]	41.3[1]	52.7[1]
	5.7	8.3	13.3	12.7	22.3	36.7	52.0	62.3[5]
22	1.3[1]	2.7[1]	6.7[1]	4.7[1]	14.3[1]	27.7[1]	43.0	59.0
	5.3	10.7	18.7	13.0	24.7	39.0	55.7	66.0

1) Heidelberg/Hahn "best" station combination instead of Heidelberg/Frankfurt.

2) Heidelberg/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt.

3) Frankfurt/Hahn "best" station combination instead of Heidelberg/Frankfurt.

4) Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt.

5) Frankfurt/Saarbrucken "worst" station combination instead of Hahn/Saarbrucken.

TABLE A-26

TWO-STATION PROBABILITIES OF ADVERSE WEATHER

FOR DECEMBER IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	1.0	4.2	8.4	8.1	17.7	36.1	54.8	57.3
	9.7	18.1	30.0	27.1	44.5	64.2	72.9	68.7
4	0.7	3.9	6.5	8.1	15.8	36.1	55.8	62.0
	11.0	20.7	29.4	27.7	43.2	64.5	72.3	74.3
7	1.0	4.5	8.4	7.1	17.7	40.0	61.3	70.0
	11.9	18.1	27.4	28.4	41.9	64.2	72.9	77.7
10	1.9	2.6	13.9	6.5	31.9	48.1[1]	61.6	67.3[1]
	11.3	20.7	30.7	30.0	44.8	64.2	72.6	79.7[5]
13	1.6	2.6	10.7	5.5	23.6	43.2	57.4	62.3[3]
	7.7	15.8	24.2	26.5	39.4	60.7	66.5	68.7
16	1.6	1.9	10.0	4.2[1]	20.0	35.5	52.9	55.0[4]
	7.1	14.8	20.0	21.9	35.5	57.7	66.5	60.0[6]
19	0.7	1.3[2]	6.8	4.5[2]	17.1	34.5	54.2	52.7[1]
	7.4	14.8	21.6	24.8	37.4	59.0	65.8	62.3[5]
22	1.0	2.9	6.8	6.5	16.1	35.4	54.8	59.0
	8.7	18.1	28.7	24.8	39.7	62.6	69.7	66.0

1) Heidelberg/Hahn "best" station combination instead of Heidelberg/Frankfurt.

2) Heidelberg/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt.

3) Frankfurt/Hahn "best" station combination instead of Heidelberg/Frankfurt.

4) Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt.

5) Frankfurt/Saarbrucken "worst" station combination instead of Hahn/Saarbrucken.

6) Heidelberg/Frankfurt "worst" station combination instead of Hahn/Saarbrucken.

TABLE A-27

TWO-STATION PROBABILITIES OF ADVERSE WEATHER

FOR JANUARY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C<800 FT &/OR V≤ 3 MI	C<2000 FT &/OR V≤ 4 MI	C<4500 FT &/OR V≤ 4 MI	C<8000 FT &/OR V≤ 5 MI
1	0.7[1]	1.9	9.0	4.2	17.1	29.7	50.7	62.9
	4.8	14.2	23.9	24.2	41.0	63.9	71.9	78.4
4	1.0	2.6	9.4	3.6	17.4	33.9	54.2	68.1
	5.5	18.4	29.7	28.1	43.9	66.1	74.5	83.2
7	1.3	2.9	9.7	5.8	19.7	33.9	58.7	72.3
	6.5	19.4	29.4	30.0	45.5	68.7	76.8	82.6
10	1.0[2]	2.3	15.8	4.5	26.8	43.9	61.6	73.9
	5.5	19.7	31.9	31.0	51.6	68.7	75.2	82.6
13	0.0[2]	1.0[2]	11.0[2]	3.9	20.7	39.4	60.3	71.6
	4.2	12.6	22.3	24.2	37.1	64.5	71.0	79.7
16	0.7[2]	1.6[2]	8.7[2]	2.6	17.4[2]	34.2	53 9	68.1
	3.6	12.3	19.7	19.4	31.3	55.5	64.8	72.9
19	0.0[2]	1.6[2]	8.4[3]	2.9	13.2	30.3	52.3[2]	67.7
	3.2	11.3	21.3	18.7	32.9	57.7	68.1	76.8
22	0.0[2]	1.9	8.1	3.6	13.6	26.8	48.1	62.9
	3.6	12.3	22.3	18.4	34.2	58.4	69.0	76.8

1) Heidelberg/Hahn "best" station combination instead of Heidelberg/Frankfurt.

2) Heidelberg/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt.

3) Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt.

TABLE A-28

TWO-STATION PROBABILITIES OF ADVERSE WEATHER
FOR FEBRUARY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0[1]	0.4	4.3	1.4	8.6	23.6	42.1	58.9
	3.2	9.3	16.4	13.6	24.6	48.6	57.1	67.5
4	0.4	1.4[2]	6.1	2.5	10.4	24.6	42.5	60.0
	3.6	11.8	22.1	17.9	32.5	53.9	61.1	72.5
7	0.7	1.8	7.9	3.6[2]	14.6	27.1	49.3	65.4
	4.6	11.4	23.6	19.6	37.5	56.4	65.0	74.6
10	0.4[1]	0.7	11.8	4.3	25.0[1]	37.1	52.5[1]	67.9
	5.0	10.4	24.6	18.6	38.2	56.4	63.6[4]	75.7
13	0.4	0.7	7.5[2]	1.8	14.6	29.3	45.0	62.1
	2.1	11.1	17.9	16.1	26.8	51.1	60.4	70.4
16	0.0	0.4[2]	4.6[2]	1.8	13.9[2]	25.4[1]	41.1[1]	55.0
	2.1	6.4	11.4	12.1	22.1	40.7	51.4	58.9
19	0.0	0.0[4]	3.6	1.8	13.2	26.4	42.1	56.4
	1.8	3.9	12.1	8.6	22.9	41.1	52.5	64.3
22	0.4[2]	0.4[2]	3.2	1.1[3]	9.6[3]	24.6	40.4	55.7
	3.2	6.1	13.9	8.6	22.9	42.1	51.4	65.4

1) Heidelberg/Hahn "best" station combination instead of Heidelberg/Frankfurt.

2) Heidelberg/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt.

3) Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt.

4) Frankfurt/Saarbrucken "worst" station combination instead of Hahn/Saarbrucken.

TABLE A-29

TWO-STATION PROBABILITIES OF ADVERSE WEATHER
FOR JULY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.0	0.0	0.0	0.3	1.3	6.5	20.7
	0.0	0.7	1.9	1.3	3.9	9.0	15.2	25.8
4	0.0	0.0[3]	0.7	0.0[3]	1.6	6.1	11.6	27.4
	0.3[5]	1.0	5.2	1.9	10.0	19.0	27.1	41.6
7	0.0	0.3[1]	2.3	0.3[1]	7.4	13.2	19.7	40.3[1]
	1.3	2.3	8.1	3.6	14.2	23.2	31.6	49.7[5]
10	0.0	0.0	0.3	0.3	2.3	9.7[3]	18.1	32.6[3]
	0.0	0.7[6]	1.3	2.3	5.5	18.4	28.4	41.6[7]
13	0.0	0.0	0.0	0.0	0.7	2.6	10.3	23.6[4]
	0.0	0.7	0.7	2.3	3.2	9.7	23.2	32.9[2]
16	0.0	0.0	0.0	0.0	0.3	1.6	5.5	15.8[4]
	0.0	0.0	0.3	1.0	2.3	5.2	13.2[6]	26.1[6]
19	0.0	0.0	0.0	0.0	0.0[1]	2.6	5.8[3]	12.6[4]
	0.0	0.3	0.7[5]	0.7	1.3	3.2	9.7	20.0[6]
22	0.0	0.0[1]	0.0	0.0	0.3	1.6	6.5	19.0
	0.0	0.3	1.0	0.7	2.3	7.1	13.2	23.6

1) Heidelberg/Hahn "best" station combination instead of Heidelberg/Frankfurt.

2) Heidelberg/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt.

3) Frankfurt/Hahn "best" station combination instead of Heidelberg/Frankfurt.

4) Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt.

5) Frankfurt/Saarbrucken "worst" station combination instead of Hahn/Saarbrucken.

6) Heidelberg/Hahn "worst" station combination instead of Hahn/Saarbrucken.

7) Heidelberg/Saarbrucken "worst" station combination instead of Hahn/Saarbrucken.

TABLE A-30

THREE-STATION PROBABILITIES OF ADVERSE WEATHER

ANNUAL SUMMARY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C<500 FT &/OR V≤ 2 MI	C≤800 FT	C<800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C<4500 FT &/OR V≤ 4 MI	C<8000 FT &/OR V≤ 5 MI
1	0.3	0.7	2.4	1.4[2]	5.2	11.9	22.6	35.6
	0.5[3]	1.4	3.8	2.3	7.6	17.9	27.8	39.8
4	0.3	1.0	3.0	1.5	6.8	14.6	26.6	41.3
	0.7	2.0	5.3	3.3	10.4	22.6	34.1	46.4
7	0.5	1.0	5.1	2.1	10.9	20.9	33.9	49.0
	1.1	2.4	7.8	4.0	14.8	29.7	40.9	54.0
10	0.5[2]	0.6	4.6	1.5	10.7	20.3	31.8	44.9
	0.7	1.6	6.2	3.5	13.6[3]	27.0	37.4	49.7
13	0.1	0.3	2.5	0.8	5.8	13.5	25.6	38.1
	0.3	1.2	3.3	2.4	7.4	17.9	31.1[3]	42.9[3]
16	0.1[2]	0.3	2.0[1]	0.8	5.2	10.8	20.7	31.6
	0.3	1.1	2.9	2.1	6.2	14.1	24.1[3]	35.2[3]
19	0.1	0.3[2]	1.8	0.8	4.8	11.3	20.6	31.6
	0.2	0.9	2.5	1.7	6.0	14.9	24.1	34.4
22	0.2[1]	0.5[1]	1.9	1.1	4.4	11.2	21.1	33.0
	0.3	1.1	3.0	1.9	6.2	15.9	26.2	37.2

1) Heidelberg/Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt/Hahn.

2) Heidelberg/Hahn/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt/Hahn.

3) Heidelberg/Hahn/Saarbrucken "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

TABLE A-31

THREE-STATION PROBABILITIES OF ADVERSE WEATHER

FOR SEP-OCT-NOV IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.9	0.0	3.9	2.3	7.7	14.5	25.7	41.7
	1.5[3]	0.1	6.4	3.1	11.3	21.5	33.4	47.0
4	0.9	0.0	5.8	2.3	10.8	17.1	31.9	47.6
	1.8[4]	0.4	8.1	3.4	14.5	27.7	41.3	54.2
7	1.4	0.0[2]	8.5	3.4[1]	15.5	25.7	40.4	56.6
	2.9[4]	0.4	12.0	5.0	20.8	36.8	49.7	61.0
10	0.9[2]	0.0	6.2	2.3	13.5	24.3	36.9	51.0
	1.3[3]	0.3[4]	8.8	4.7	17.5	32.4	44.5	58.7
13	0.1	0.0	2.5	1.0	6.4	14.3	27.3	40.1
	0.3[3]	0.0	3.6	2.5	7.6[3]	18.7	32.0[4]	44.6[4]
16	0.1	0.0	2.1[1]	1.1	5.3	11.7	22.0	33.2
	0.2	0.0	3.1	2.4	6.5[3]	14.1[4]	23.6	36.9[4]
19	0.2	0.0	2.3	1.2[1]	6.3	13.3	22.5	35.4
	0.4	0.0	3.4	2.1	7.6	16.3	26.4	39.7
22	0.6	0.1	3.1	1.4[1]	5.9	13.7	22.8	36.9
	0.7	0.2[3]	4.6	2.5	8.1	17.0	27.9	41.5

1) Heidelberg/Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt/Hahn.

2) Heidelberg/Hahn/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt/Hahn.

3) Heidelberg/Frankfurt/Saarbrucken "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

4) Heidelberg/Hahn/Saarbrucken "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

TABLE A-32

THREE-STATION PROBABILITIES OF ADVERSE WEATHER

FOR DEC-JAN-FEB IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.3	1.3	5.2[1]	3.0[1]	11.4	26.9	45.7	58.6
	0.7[3]	3.1	7.8	5.6	15.9	38.0	53.3	65.0
4	0.3	1.9[1]	5.0	3.3	11.6	28.9	47.9	62.4[1]
	1.0	4.6	10.0	8.1	18.9	39.9	56.7	68.4
7	0.3	1.7	6.3	3.8	14.3	30.8	52.7[1]	65.9[1]
	1.2	4.3	11.1	8.8	21.4	43.6	59.6	70.8
10	1.0[1]	1.0[1]	9.3[1]	3.2	23.1	37.6	53.6	67.1
	1.4	3.2	14.3	7.7	28.0	48.1	59.9	72.0
13	0.4	0.7	6.7[1]	2.2	14.8	31.7	48.8	62.2
	0.8	2.9	9.3	5.9	19.6	40.9	53.7	66.2
16	0.4[1]	0.6	5.9[1]	1.9[1]	13.3[1]	26.3	43.0	57.6
	1.0	2.6	8.3	5.4	16.8	34.9	48.6	60.0
19	0.0[2]	0.7[2]	4.8	2.0[1]	10.8[1]	26.4	45.2	58.3
	0.3[4]	2.1	6.0	4.6	14.2[3]	35.4	51.4	63.9
22	0.2[1]	0.7[1]	4.2	2.4[1]	10.3	25.4	43.9	57.2
	0.6	2.3	7.1	4.6	14.4	36.4	52.9	64.8

1) Heidelberg/Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt/Hahn.

2) Heidelberg/Hahn/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt/Hahn.

3) Heidelberg/Hahn/Saarbrucken "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

4) Heidelberg/Frankfurt/Hahn "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

TABLE A-33

THREE-STATION PROBABILITIES OF ADVERSE WEATHER

FOR MAR-APR-MAY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.1	0.2[1]	0.1[1]	1.3	4.4	13.6[1]	25.9[1]
	0.0	0.1	0.9	0.5	2.4	7.8	17.2	29.8
4	0.1	0.2	0.5	0.4	2.7[1]	6.6	16.3[1]	31.2[1]
	0.3	0.7	1.4	1.3	4.0	12.1	23.3	36.4
7	0.1	0.1	2.8[1]	0.5	7.2	15.8	24.8	41.1
	0.5	1.0	4.5	1.4	9.7[2]	22.3	33.3	47.6
10	0.0	0.1	0.9	0.2	3.9	12.5	23.3	35.1
	0.0	0.4	1.3	1.3	7.6	17.1	28.8	39.7
13	0.0	0.0	0.2	0.1	1.7[1]	5.4	17.6	30.1
	0.0	0.1	0.8[2]	1.1	2.8	9.1[2]	25.2[2]	36.4[2]
16	0.0	0.0	0.2	0.0	1.0	4.0	12.3[1]	22.2[1]
	0.0	0.1	0.5[2]	0.5	1.6	5.8	16.1[2]	27.8[2]
19	0.0	0.0	0.1[1]	0.0	1.4	4.8	11.3	21.3[1]
	0.0	0.1[2]	0.7	0.2	2.4[1]	6.4	14.5	23.3
22	0.0	0.1	0.3	0.2[1]	1.1	4.1	12.0[1]	23.4
	0.0	0.1	0.7[2]	0.4	1.9	6.9	16.6	26.9[2]

1) Heidelberg/Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt/Hahn.

2) Heidelberg/Hahn/Saarbrucken "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

TABLE A-34

THREE-STATION PROBABILITIES OF ADVERSE WEATHER

FOR JUN-JUL-AUG IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.0	0.3	0.0	0.5	2.2	5.4	15.1
	0.0	0.1	1.1[3]	0.1	1.4[3]	4.7	7.3	18.0
4	0.0	0.0	1.2	0.1	2.1	5.9	10.3	23.0
	0.1	0.4	3.0	0.4	4.2	11.3	15.1	27.2
7	0.0	0.0[2]	5.7	0.4	6.9	11.5	17.7	32.0
	0.3	0.4	8.2	1.0	9.2[3]	16.5	21.0	37.8[3]
10	0.0	0.0	1.2	0.2	2.7	7.2	13.4	27.1
	0.1	0.3[3]	3.5[3]	0.8	4.4[3]	11.9[3]	16.4	32.0[3]
13	0.0	0.0	0.3	0.0	0.3	2.9	8.7	20.3[1]
	0.0	0.0	1.0[3]	0.1[3]	1.2[3]	4.6[3]	13.5	25.5[3]
16	0.0	0.0	0.2	0.0	0.3	1.6	5.5	13.2[1]
	0.0	0.0	0.7[3]	0.1[3]	0.5	2.6[3]	8.1	17.5
19	0.0	0.0	0.1[1]	0.0	0.1[1]	1.2	3.4	10.6[1]
	0.0	0.0	0.8	0.0	0.9[3]	2.1[3]	4.1	13.6[3]
22	0.0	0.1	0.4	0.1	0.2	1.7	5.7	14.9
	0.0	0.2[3]	0.9[3]	0.3[3]	1.5[3]	3.6	7.4	18.0[3]

1) Heidelberg/Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt/Hahn.

2) Heidelberg/Hahn/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt/Hahn.

3) Heidelberg/Hahn/Saarbrucken "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

TABLE A-35

THREE-STATION PROBABILITIES OF ADVERSE WEATHER

FOR SEPTEMBER IN PERCENT

(LOCAL STANDARD TIME)

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.0	0.0	0.0	1.3[2]	4.0	10.0	25.3
	0.0	0.0	1.0	0.0	3.7	8.7	15.7	32.0
4	0.0	0.0	2.0[1]	0.0	5.3	9.3	15.7	31.7
	0.3[4]	0.0	4.3	0.0	9.3	18.7	25.3	39.3
7	0.7	0.0	7.0	0.3[5]	11.7	17.3	23.7	41.3
	2.0	0.7	9.3[3]	1.0[4]	20.3[3]	29.3[3]	35.3[3]	52.7[3]
10	0.0	0.3[1]	3.0	0.3[1]	7.7	12.7	17.7	34.3
	0.3[3]	1.0	4.7[3]	2.0	11.7[3]	21.0[3]	26.0[3]	46.7[3]
13	0.0	0.0	0.3	0.0	1.7	4.0	10.3	23.0
	0.0	0.3[4]	0.3	0.3[4]	2.0[4]	6.0[3]	16.3[4]	27.0[4]
16	0.0	0.0	0.3	0.3	1.0	2.0	6.3	15.3
	0.0	0.3	0.3	0.7[4]	2.0	3.3[4]	9.3[4]	20.7[4]
19	0.0	0.0	0.3	0.0	1.0[1]	3.0	5.7	18.0
	0.0	0.0	0.7	0.3	1.3	5.0	9.0	21.7
22	0.0	0.0	0.3	0.3	0.7	3.3	6.7	18.3
	0.0	0.3	0.7	0.7	2.0	5.7	11.3	24.0

1) Heidelberg/Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt/Hahn.

2) Heidelberg/Hahn/Saarbrucken "best" station combination.

3) Heidelberg/Frankfurt/Saarbrucken "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

4) Heidelberg/Hahn/Saarbrucken "worst" station combination.

5) Frankfurt/Hahn/Saarbrucken "best" station combination.

TABLE A-36

THREE-STATION PROBABILITIES OF ADVERSE WEATHER

FOR OCTOBER IN PERCENT

(LOCAL STANDARD TIME)

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	1.9	1.3[1]	6.5	1.9[1]	10.3	18.1	29.4	52.7
	2.9[3]	2.6	9.0	3.2	14.8	25.5	37.7	58.3[4]
4	1.6	2.9	8.7	3.9[2]	14.2	20.7	36.8	56.7
	3.2[4]	3.2	10.3	5.2	15.8	29.7	46.1	62.7
7	3.2	1.9	11.6	4.2	19.4	34.5	50.7	63.3
	4.8[3]	4.5	15.2	6.8	24.5	42.3	56.5	67.7
10	1.6[2]	1.3[2]	7.1[1]	3.2	14.8	29.0	41.9	62.3
	2.9[3]	3.5	10.3	5.5[3]	19.7[4]	37.1	49.4	70.3
13	0.0	0.3	2.6	1.0	7.4	14.5	28.1	55.0
	0.0	1.0	3.9[4]	1.9	9.4[3]	19.7	34.5[4]	59.7[3]
16	0.0	0.0	1.6[6]	0.7[1]	5.2	11.3	21.6	47.0[6]
	0.0	0.3	2.6[4]	1.0	6.5[3]	16.1[4]	30.3[4]	50.3[4]
19	0.0	0.3[2]	2.6	1.0	8.1	17.1	27.1	47.0
	0.3	1.0	3.6	1.6	9.4[4]	19.7[4]	30.7[4]	52.7
22	0.7[2]	1.0[1]	4.8	1.3[1]	8.4	15.8	26.1	52.0
	1.0[5]	2.3	6.1[3]	2.6	11.0[4]	18.7[4]	31.0	57.0

1) Heidelberg/Frankfurt/Saarbrucken "best" station combination instead of heidelberg/Frankfurt/Hahn.

2) Heidelberg/Hahn/Saarbrucken "best" station combination.

3) Heidelberg/Frankfurt/Saarbrucken "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

4) Heidelberg/Hahn/Saarbrucken "worst" station combination.

5) Heidelberg/Frankfurt/Hahn "worst" station combination.

6) Frankfurt/Hahn/Saarbrucken "best" station combination.

TABLE A-37

THREE-STATION PROBABILITY OF ADVERSE WEATHER

FOR NOVEMBER IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.7	2.7[2]	5.0	4.3	10.7	21.3	37.7	52.7
	1.7[3]	4.7[3]	9.0	6.0	15.3	30.3	46.7	57.7
4	1.0	2.0	6.3	3.0	12.7	21.3	43.0	56.7
	1.7	4.0	9.7	6.0	18.3	34.7	52.3	62.7
7	0.3	3.3[1]	6.7	5.0[1]	15.3	25.0	46.7	63.3
	1.7	6.7	11.7	7.7	20.3	39.7	57.7	67.7
10	0.7[1]	1.0	8.3	3.0	18.0	31.0	51.0	62.3
	1.3	4.3	12.7	7.7	23.0	42.0	59.3	70.3
13	0.3	1.0	4.7	2.0	10.0	24.3	43.3	55.0
	1.0[3]	4.0	7.3	5.7	11.7	31.7	47.7	59.7[3]
16	0.3	1.0	4.0[1]	2.0	9.7	21.7	37.3[1]	47.0[5]
	0.7	4.3	7.3	6.0	12.0	24.3	39.0	50.3[4]
19	0.7	1.0[2]	4.0	2.7	9.3	19.7	34.7	47.0
	1.0	3.0	6.0	4.7	13.3	25.0	40.0	52.7
22	0.7	1.7	4.0	3.0	9.3	22.7	36.7	52.0
	1.3	3.3	8.3	5.3	13.3	28.0	43.3	57.0

1) Heidelberg/Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt/Hahn.

2) Heidelberg/Hahn/Saarbrucken "best" station combination.

3) Heidelberg/Frankfurt/Saarbrucken "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

4) Heidelberg/Hahn/Saarbrucken "worst" station combination.

5) Frankfurt/Hahn/Saarbrucken "best" station combination.

TABLE A-38

THREE-STATION PROBABILITIES OF ADVERSE WEATHER

FOR DECEMBER IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.3	2.6	6.5	4.3	14.5	33.6	51.3	63.6
	1.6[4]	3.9	11.0	6.0	21.3	46.5	60.0	69.4
4	0.0	2.6[1]	5.2	3.0	12.3	33.6	52.6[1]	66.1
	1.6[4]	5.2	10.7	6.0	21.3	45.2	59.7	71.0
7	0.3	2.3	6.5	5.0[1]	13.6	36.8	55.8[1]	70.0
	1.6	4.2	11.0	7.7	22.3	48.7	62.6	71.9
10	1.6	1.6	10.0[1]	3.0	25.8	43.2	56.8	70.7
	2.6[4]	3.2	15.8	7.7	29.4	50.0	61.6	73.9
13	1.0	0.7	7.4[1]	2.0	18.4	37.7	51.6	65.5
	1.3	3.2	10.3	5.7	23.6	45.5	56.1	66.8
16	1.0[1]	0.7[1]	7.4	2.0	16.1[1]	30.3	47.1[1]	62.9[1]
	1.9	3.6	9.4	6.0	19.7	40.0	55.2	66.5
19	0.0[2]	0.7[2]	4.8	2.7	13.9	31.3	50.3	61.6
	0.7[3]	3.2	8.4	4.7	18.7	41.9	56.4	67.4
22	0.3[1]	1.0	5.5	3.0	13.9	31.6	51.0	61.3
	1.0	3.6	10.0	5.3	19.4	43.9	59.7	68.7

1) Heidelberg/Frankfurt/Saarbrucken "best" station combination instead of heidelberg/Frankfurt/Hahn.

2) Heidelberg/Hahn/Saarbrucken "best" station combination.

3) Heidelberg/Frankfurt/Saarbrucken "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

4) Heidelberg/Hahn/Saarbrucken "worst" station combination.

TABLE A-39

THREE-STATION PROBABILITIES OF ADVERSE WEATHER

FOR JANUARY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.3[1,2]	1.0	6.5[1]	2.9	13.6	26.8	46.5[1]	58.4
	0.7	3.9	8.1	5.8	17.1	38.4	54.5	65.8
4	0.7[1,2]	2.3	6.1	2.9	13.9[1]	31.0	50.7	64.2[1]
	1.6	5.5	11.6	8.7	21.9	42.9	61.6	72.3
7	0.7	1.6	7.1	4.2	17.1	31.0	55.5	67.7[1]
	1.6[3]	6.1	12.9	10.7	23.9	46.5	64.5	73.6
10	0.7[1,2]	0.7[1]	9.7[1]	3.2	23.2	38.4	57.1	69.4
	1.9[4]	4.2	15.8	8.4	30.7	51.0	65.2	75.5
13	0.0[1,2]	0.3[1]	7.4	1.9	15.2	33.9	55.2[1]	66.1
	1.0	2.9	11.0	5.2	20.3	45.8	59.7	71.6
16	0.3[1,2]	0.7	6.1[1]	1.3[1]	13.5[1]	28.4	46.8	61.3[1]
	1.0[4]	1.9	9.0	3.9	16.8	38.7	52.6	63.2
19	0.0[1,2]	1.3	5.2[1]	1.9[1]	8.1[1]	26.5	47.1[1]	61.9
	0.3	1.9	8.1	3.9	12.3[3]	38.1	56.1	67.7
22	0.0[1,2]	0.7	4.8	1.9	10.0	23.2	42.9	57.7
	0.3	1.9	7.7	4.5	14.8	37.7	56.8	67.7

1) Heidelberg/Frankfurt/Saarbrucken "best" station combination instead of heidelberg/Frankfurt/Hahn.

2) Heidelberg/Hahn/Saarbrucken "best" station combination.

3) Heidelberg/Hahn/Saarbrucken "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

4) Heidelberg/Frankfurt/Hahn "worst" station combination.

TABLE A-40

THREE-STATION PROBABILITIES OF ADVERSE WEATHER
FOR FEBRUARY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.4	2.5	0.7[1]	5.7	19.6	37.9	53.2
	0.4	1.4	3.9	2.5	9.3[3]	28.2	44.6	59.3
4	0.0	0.7[1]	3.6	1.4	7.9	21.4	39.3	56.4[1]
	0.4	2.9	7.5	5.4	13.6	30.7	47.9	61.4
7	0.0	0.7[2]	5.4	2.1[2]	12.1	23.9	45.4[1]	59.3[1]
	0.7	2.5	9.3	5.7	17.9	34.6	50.7	66.4
10	0.4	0.4	8.2[1]	2.1	20.0	30.4	46.1	60.7
	0.7	2.1	11.4[3]	4.6	23.6	42.9	52.1	66.4[3]
13	0.0	0.4	5.0	1.4	10.4	22.5	38.2	54.3
	0.4	2.5	6.4	4.6	14.3	31.1[3]	44.3	60.4[3]
16	0.0	0.4	3.6[1]	1.4	10.0[1]	19.6	33.6	46.4
	0.4	2.1	6.4	4.6	13.6	25.0	37.1[3]	51.1[3]
19	0.0	0.0[1]	2.1[5]	1.1[1]	8.9[1]	21.1	35.7	50.7
	0.4	1.1	4.3[3]	1.8[3]	11.4	25.4	40.7	55.7
22	0.4[1]	0.4[1]	2.1	1.1	6.1	20.7	35.4[1]	51.1
	0.7[4]	1.1	4.6[3]	1.8[4]	9.3[3]	26.8	40.4	56.4

1) Heidelberg/Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt/Hahn.

2) Heidelberg/Hahn/Saarbrucken "best" station combination.

3) Heidelberg/Hahn/Saarbrucken "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

4) Heidelberg/Frankfurt/Hahn "worst" station combination.

5) Frankfurt/Hahn/Saarbrucken "best" station combination.

TABLE A-41

THREE-STATION PROBABILITIES OF ADVERSE WEATHER
FOR JULY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.0	0.0	0.0	0.3[1]	0.7	4.2[1]	14.8
	0.0	0.0	0.0	0.0	0.7[4]	1.9[4]	6.1[4]	16.1[4]
4	0.0	0.0	0.7	0.0	1.3	4.5	9.0	21.6
	0.0	0.3[3]	1.3[4]	0.3[3]	3.2[4]	8.4[4]	15.2[4]	27.7[4]
7	0.0	0.0[2]	1.6[1]	0.0[2]	4.8[1]	8.1	13.2	31.0
	0.0	0.3[3]	3.2[3]	0.3[3]	6.5[4]	11.6[4]	19.0[4]	37.7[4]
10	0.0	0.0	0.0	0.3	1.6	6.1	12.6	28.1
	0.0	0.0	0.3[4]	0.7[4]	1.6	9.4[4]	20.0[4]	32.3[4]
13	0.0	0.0	0.0	0.0	0.3	1.6	8.4	18.1[1]
	0.0	0.0	0.3[4]	0.0.	1.3[4]	2.6[4]	15.2[4]	25.2[4]
16	0.0	0.0	0.0	0.0	0.3	1.0	4.2[1]	12.3
	0.0	0.0	0.0	0.0	0.7[4]	2.6[4]	7.7[4]	17.4[4]
19	0.0	0.0	0.0	0.0	0.0	0.7	3.9	8.4[1]
	0.0	0.0	0.0	0.0	0.0	1.6[3]	4.8[3]	11.3[4]
22	0.0	0.0	0.0	0.0	0.0	1.3	4.8	13.2
	0.0	0.3[3]	0.3[3]	0.3[3]	0.3[3]	2.3[4]	7.7[4]	16.1[4]

1) Heidelberg/Frankfurt/Saarbrucken "best" station combination instead of Heidelberg/Frankfurt/Hahn.

2) Heidelberg/Hahn/Saarbrucken "best" station combination.

3) Heidelberg/Frankfurt/Saarbrucken "worst" station combination instead of Frankfurt/Hahn/Saarbrucken.

4) Heidelberg/Hahn/Saarbrucken "worst" station combination.

TABLE A-42

FOUR-STATION PROBABILITIES OF ADVERSE WEATHER

ANNUAL SUMMARY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.3	0.6	1.9	1.0	4.6	11.2	21.1	32.4
4	0.3	0.8	2.6	1.3	5.9	13.7	24.9	38.0
7	0.4	0.6	4.3	1.6	9.6	19.8	32.0	46.3
10	0.3	0.4	3.5	1.2	9.5	19.2	30.0	42.7
13	0.1	0.1	1.8	0.6	4.9	12.4	23.4	35.0
16	0.1	0.2	1.7	0.6	4.1	9.4	18.2	28.0
19	0.5	0.2	1.3	0.6	3.8	10.3	18.7	28.6
22	0.2	0.3	1.6	0.8	3.8	10.6	19.6	30.5

TABLE A-43

FOUR-STATION PROBABILITIES OF ADVERSE WEATHER

FOR SEP-OCT-NOV IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V<1 KM	C<500 FT	C<500 FT &/OR V< 2 MI	C<800 FT	C<800 FT &/OR V< 3 MI	C<2000 FT &/OR V< 4 MI	C<4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.8	1.2	3.4	1.7	7.0	13.7	24.5	38.5
4	0.9	1.3	5.1	1.8	9.7	15.8	29.9	44.1
7	1.1	1.3	7.5	2.6	14.5	24.5	39.1	54.1
10	0.4	0.7	5.1	1.8	12.1	23.2	34.8	49.3
13	0.1	0.2	2.1	0.7	5.2	12.9	24.6	36.7
16	0.1	0.3	1.7	1.0	4.3	10.3	19.5	29.6
19	0.2	0.4	1.8	0.8	5.2	11.5	20.6	32.4
22	0.4	0.8	2.5	1.1	5.5	12.8	21.1	33.9

TABLE A-44

FOUR-STATION PROBABILITIES OF ADVERSE WEATHER

FOR DEC-JAN-FEB IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.2	1.0	4.2	2.4	10.1	25.7	43.3	55.7
4	0.2	1.8	4.1	2.9	10.0	27.7	45.6	59.8
7	0.3	1.1	5.1	2.9	12.6	29.3	49.6	62.8
10	0.9	0.8	7.9	2.7	20.0	35.8	50.8	65.2
13	0.2	0.2	5.0	1.7	12.9	29.3	45.4	59.3
16	0.3	0.3	5.0	1.4	11.3	23.7	38.7	53.0
19	0.0	0.4	3.4	1.4	8.9	25.0	41.8	55.7
22	0.2	0.3	3.6	1.9	8.6	24.4	41.6	54.7

TABLE A-45

FOUR-STATION PROBABILITIES OF ADVERSE WEATHER

FOR MAR-APR-MAY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.0	0.1	0.1	1.0	4.0	12.4	23.2
4	0.1	0.2	0.5	0.3	2.2	5.8	14.8	28.3
7	0.1	0.1	2.1	0.4	5.7	15.0	23.6	38.4
10	0.0	0.0	0.8	0.2	3.6	11.5	22.0	32.6
13	0.0	0.0	0.2	0.1	1.5	5.1	16.0	27.6
16	0.0	0.0	0.1	0.0	1.0	3.7	10.7	19.6
19	0.0	0.0	0.1	0.0	1.4	4.1	10.0	18.4
22	0.0	0.0	0.3	0.2	1.0	3.8	11.3	20.9

TABLE A-46

FOUR-STATION PROBABILITIES OF ADVERSE WEATHER

FOR JUN-JUL-AUG IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.0	0.1	0.0	0.3	1.7	4.2	12.8
4	0.0	0.0	1.1	0.1	2.0	5.8	9.3	20.4
7	0.0	0.0	4.5	0.3	5.9	10.7	15.7	30.5
10	0.0	0.0	1.1	0.2	2.4	6.5	12.4	24.2
13	0.0	0.0	0.2	0.0	0.2	2.5	7.6	17.3
16	0.0	0.0	0.1	0.0	0.1	1.2	3.9	10.5
19	0.0	0.0	0.1	0.0	0.0	0.9	2.4	8.4
22	0.0	0.1	0.4	0.1	0.2	1.6	4.4	13.0

TABLE A-47

FOUR-STATION PROBABILITIES OF ADVERSE WEATHER

FOR SEPTEMBER IN PERCENT

(LOCAL STANDARD TIME)

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.0	0.0	0.0	1.3	3.7	9.0	22.0
4	0.0	0.0	2.0	0.0	5.0	8.0	14.7	27.0
7	0.7	0.0	5.7	0.0	10.7	16.3	22.7	38.7
10	0.0	0.3	2.3	0.3	7.3	11.3	16.0	31.7
13	0.0	0.0	0.3	0.0	1.3	3.0	9.0	18.0
16	0.0	0.0	0.3	0.3	1.0	2.0	5.3	13.7
19	0.0	0.0	0.3	0.0	0.7	2.7	5.3	15.3
22	0.0	0.0	0.3	0.3	0.7	3.0	6.0	14.7

TABLE A-48

FOUR-STATION PROBABILITIES OF ADVERSE WEATHER

FOR OCTOBER IN PERCENT

(LOCAL STANDARD TIME)

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	1.6	1.3	5.2	1.9	9.4	17.1	27.7	43.2
4	1.6	2.3	7.4	2.9	12.3	19.0	33.6	50.7
7	2.3	1.3	10.3	3.6	17.7	32.6	48.4	62.9
10	1.0	1.0	6.1	2.6	12.9	27.7	40.0	55.5
13	0.0	0.3	1.9	0.7	6.5	12.9	25.5	39.0
16	0.0	0.0	1.3	0.7	4.2	10.3	19.7	31.9
19	0.0	0.3	1.9	0.7	6.5	15.2	24.2	38.1
22	0.7	1.0	3.9	1.3	7.7	14.2	23.5	38.4

TABLE A-49

FOUR-STATION PROBABILITY OF ADVERSE WEATHER

FOR NOVEMBER IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.7	2.3	5.0	3.0	10.3	20.3	36.7	50.0
4	1.0	1.7	5.7	2.3	11.7	20.3	41.3	54.3
7	0.3	2.7	6.3	4.3	15.0	24.3	46.0	60.3
10	0.3	0.7	6.7	2.3	16.0	30.3	48.3	60.7
13	0.3	0.3	4.0	1.3	7.7	22.7	39.3	52.0
16	0.3	1.0	3.3	2.0	7.7	18.7	33.3	43.0
19	0.7	1.0	3.0	2.0	8.3	16.7	32.0	43.7
22	0.7	1.3	3.3	2.0	8.7	21.7	35.0	50.0

TABLE A-50

FOUR-STATION PROBABILITIES OF ADVERSE WEATHER

FOR DECEMBER IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.3	1.6	5.8	3.6	14.2	32.9	49.7	61.3
4	0.0	2.3	4.2	4.2	11.0	31.9	50.3	63.9
7	0.3	1.6	5.2	2.9	11.6	35.2	52.6	66.8
10	1.6	1.3	8.7	2.9	21.6	40.7	53.9	69.0
13	0.7	0.3	5.5	2.3	15.2	34.8	47.7	61.6
16	0.7	0.3	6.8	2.3	13.9	27.1	42.3	58.4
19	0.0	0.3	4.2	1.9	12.6	30.7	48.1	59.4
22	0.3	0.3	4.8	2.6	11.9	30.7	48.7	58.7

TABLE A-51

FOUR-STATION PROBABILITIES OF ADVERSE WEATHER

FOR JANUARY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.3	1.0	4.8	2.9	11.6	25.5	44.2	55.2
4	0.7	2.3	5.2	2.9	11.6	30.0	48.7	61.3
7	0.7	1.3	6.1	3.9	14.8	29.7	53.2	64.5
10	0.7	0.7	7.7	3.2	20.7	37.1	54.8	67.1
13	0.0	0.3	5.5	1.6	13.2	31.0	52.3	63.6
16	0.3	0.3	4.8	1.0	11.0	25.2	42.3	56.5
19	0.0	1.0	4.5	1.6	6.5	24.5	43.6	58.7
22	0.0	0.3	4.2	1.6	8.1	22.6	41.0	55.2

TABLE A-52

FOUR-STATION PROBABILITIES OF ADVERSE WEATHER
FOR FEBRUARY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.4	1.8	0.7	3.9	17.9	35.4	50.0
4	0.0	0.7	2.9	1.4	7.1	20.4	36.8	53.6
7	0.0	0.4	3.9	1.8	11.1	22.5	42.1	56.4
10	0.4	0.4	7.1	1.8	17.5	28.9	42.7	58.9
13	0.0	0.0	3.9	1.1	10.0	21.4	35.4	52.1
16	0.0	0.4	3.2	1.1	8.9	18.2	30.7	43.2
19	0.0	0.0	1.4	0.7	7.5	19.3	32.9	48.2
22	0.4	0.4	1.4	1.1	4.6	19.3	33.2	48.6

TABLE A-53

FOUR-STATION PROBABILITIES OF ADVERSE WEATHER
FOR JULY IN PERCENT

(LOCAL STANDARD TIME)

1967-1976

HR	V≤1 KM	C≤500 FT	C≤500 FT &/OR V≤ 2 MI	C≤800 FT	C≤800 FT &/OR V≤ 3 MI	C≤2000 FT &/OR V≤ 4 MI	C≤4500 FT &/OR V≤ 4 MI	C≤8000 FT &/OR V≤ 5 MI
1	0.0	0.0	0.0	0.0	0.0	0.7	2.9	11.9
4	0.0	0.0	0.7	0.0	1.3	4.2	7.7	19.0
7	0.0	0.0	1.3	0.0	3.9	7.1	11.0	29.4
10	0.0	0.0	0.0	0.3	1.3	5.5	10.7	24.2
13	0.0	0.0	0.0	0.0	0.3	1.3	7.1	15.8
16	0.0	0.0	0.0	0.0	0.3	1.0	3.9	10.0
19	0.0	0.0	0.0	0.0	0.0	0.7	2.9	7.4
22	0.0	0.0	0.0	0.0	0.0	1.3	4.2	11.9

APPENDIX B

CUMULATIVE DISTRIBUTION OF VISIBILITY OBSERVATIONS

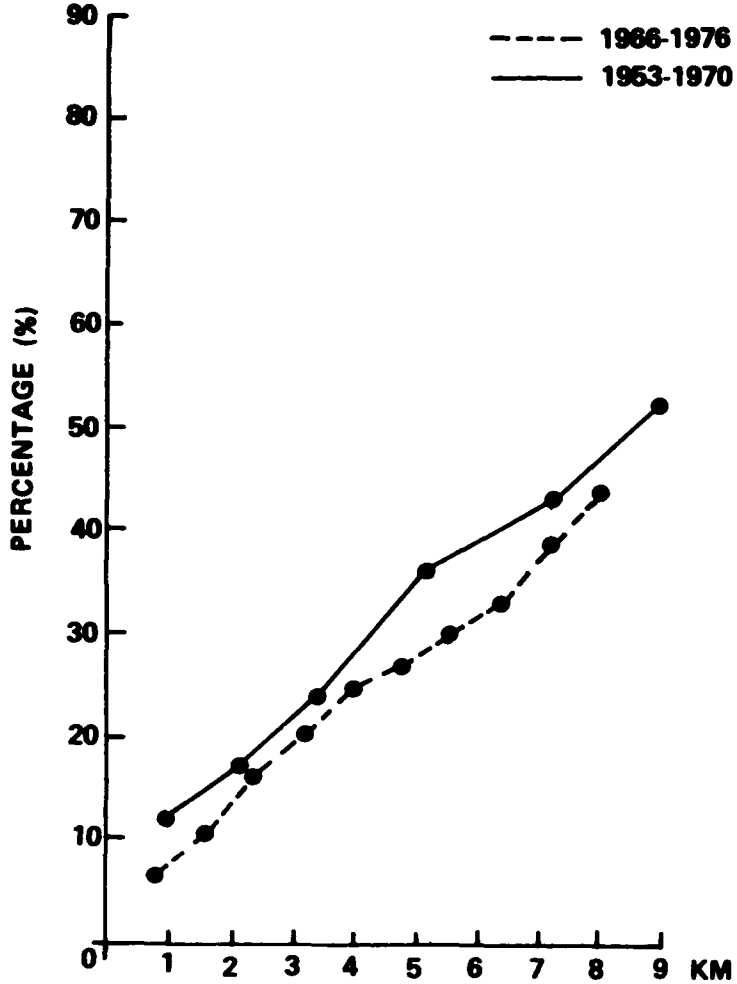

Figure B-1. Cumulative distribution of visibility observations at Bitburg, hours 3-5.

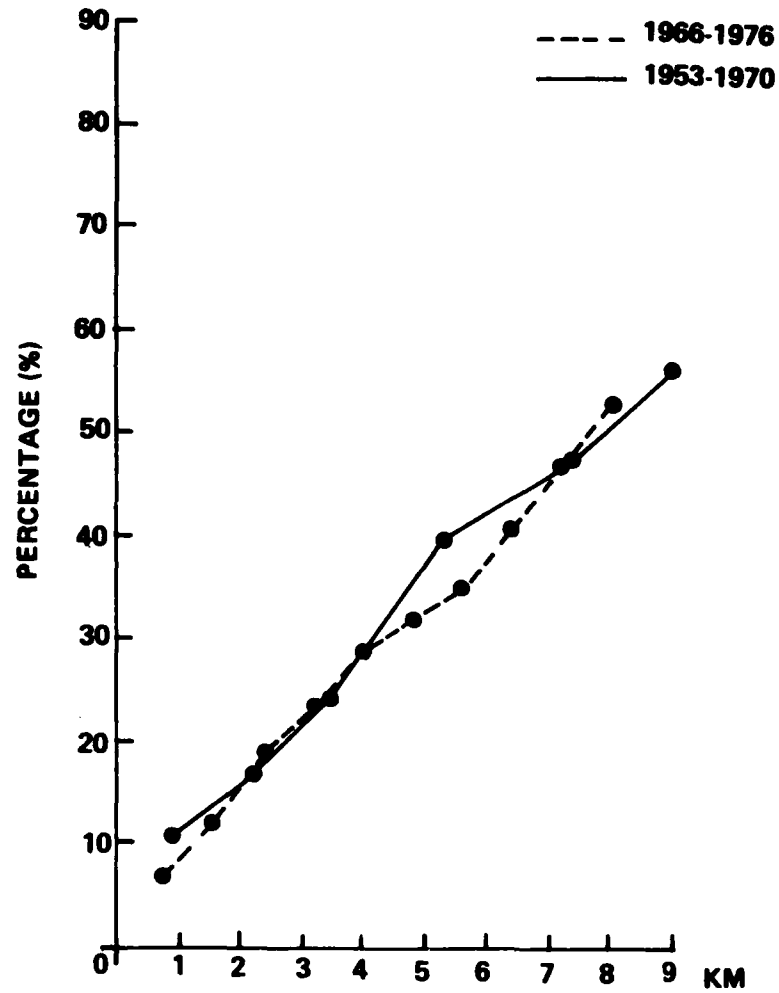

Figure B-2. Cumulative distribution of visibility observations at Bitburg, hours 6-8.

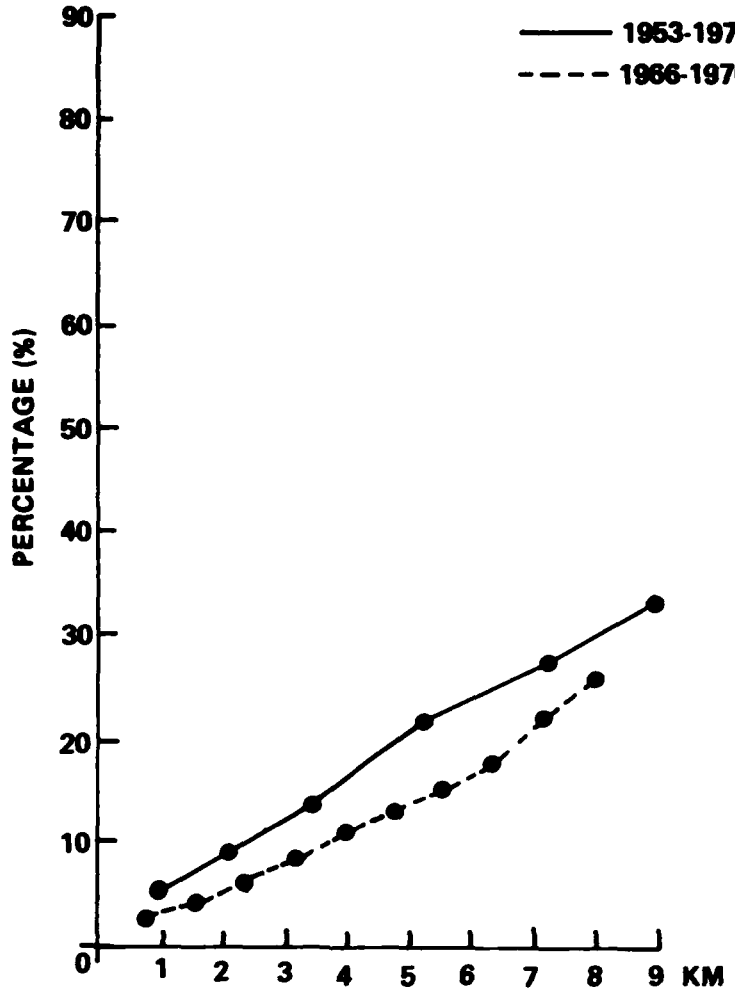

Figure B-3. Cumulative distribution of visibility observations at Bitburg, hours 18-20.

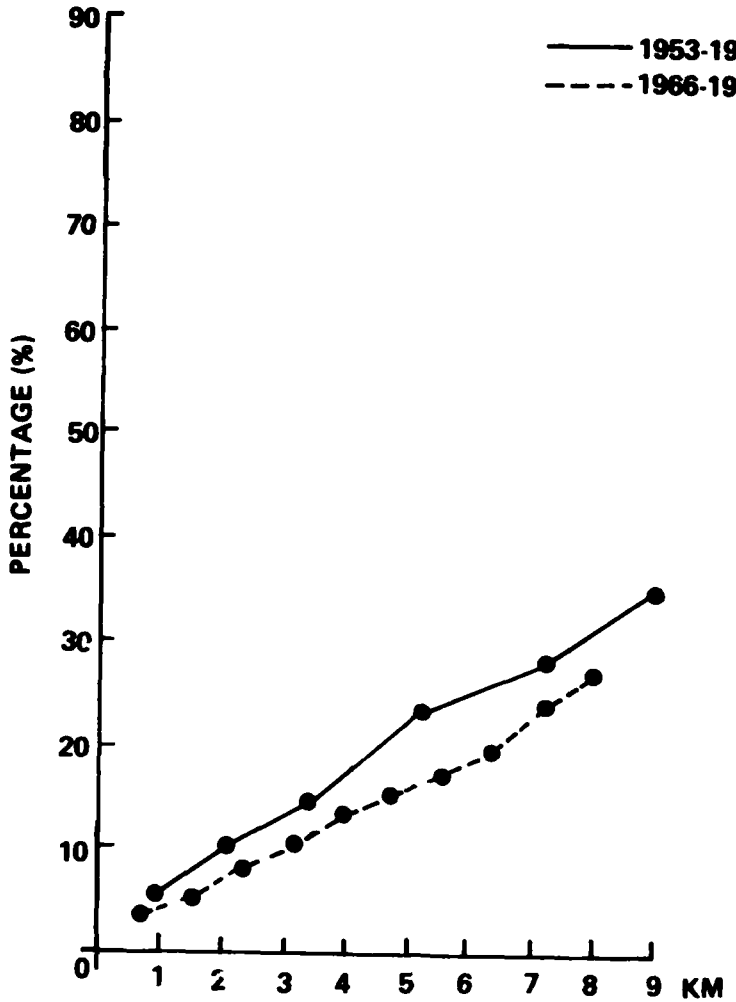

Figure B-4. Cumlative distribution of visibility observations at Bitburg, hours 21-23.

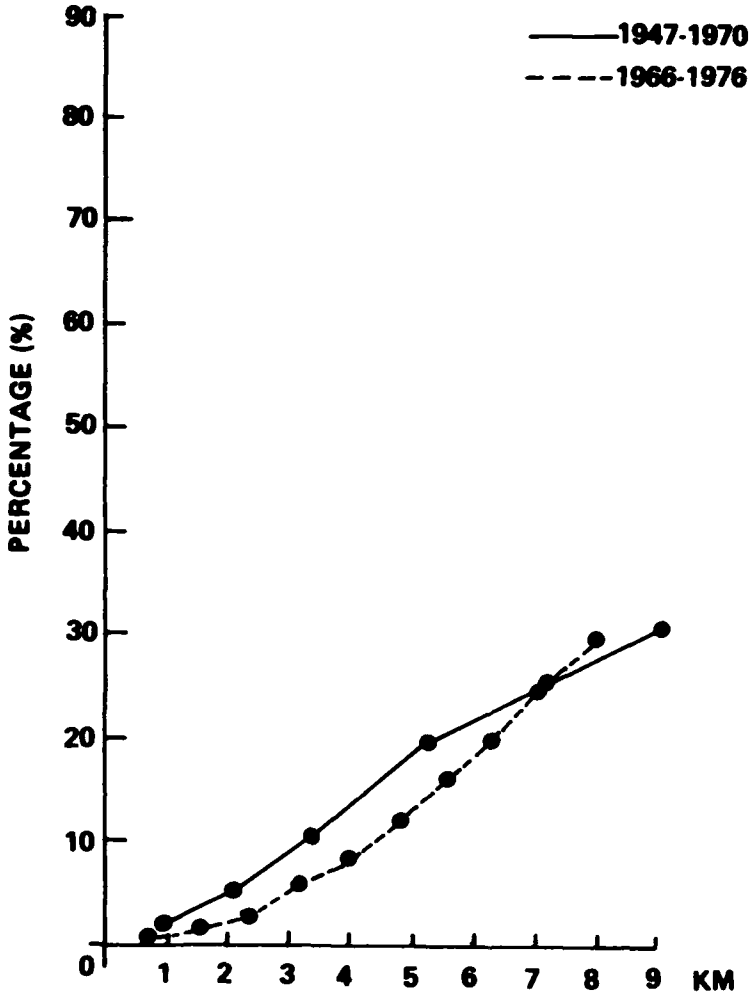

Figure B-7. Cumulative distribution of visibility observations at Frankfurt, hours 18-20.

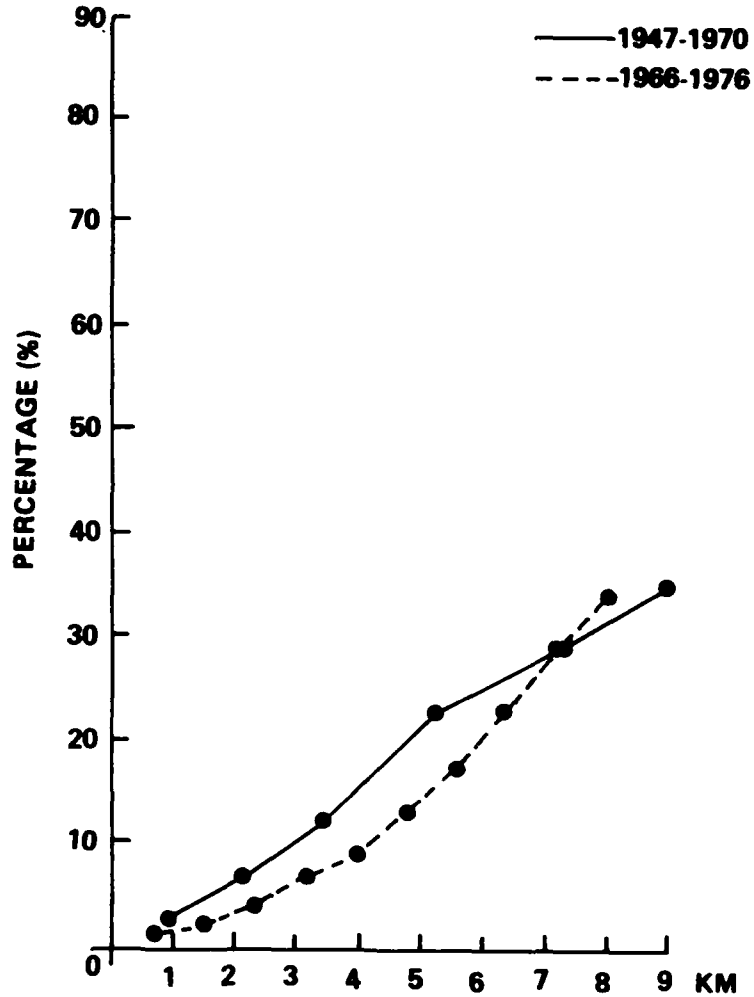

Figure B-8. Cumulative distribution of visibility observations at Frankfurt, hours 21-23.

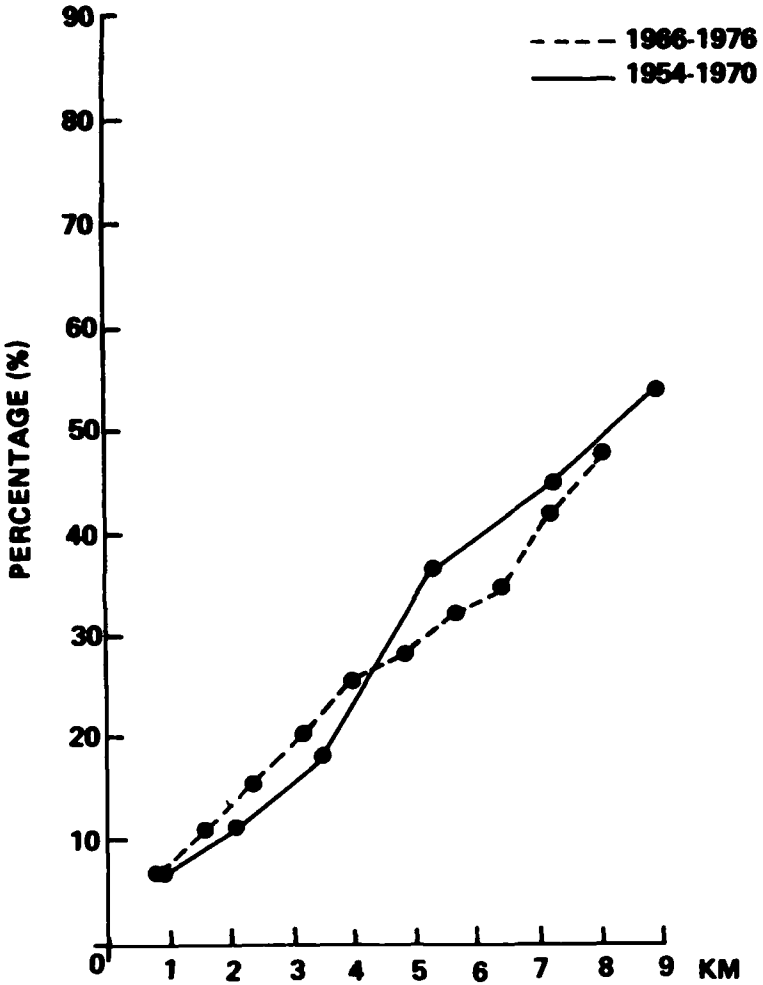

Figure B-9. Cumulative distribution of visibility observations at Sembach, hours 3-5.

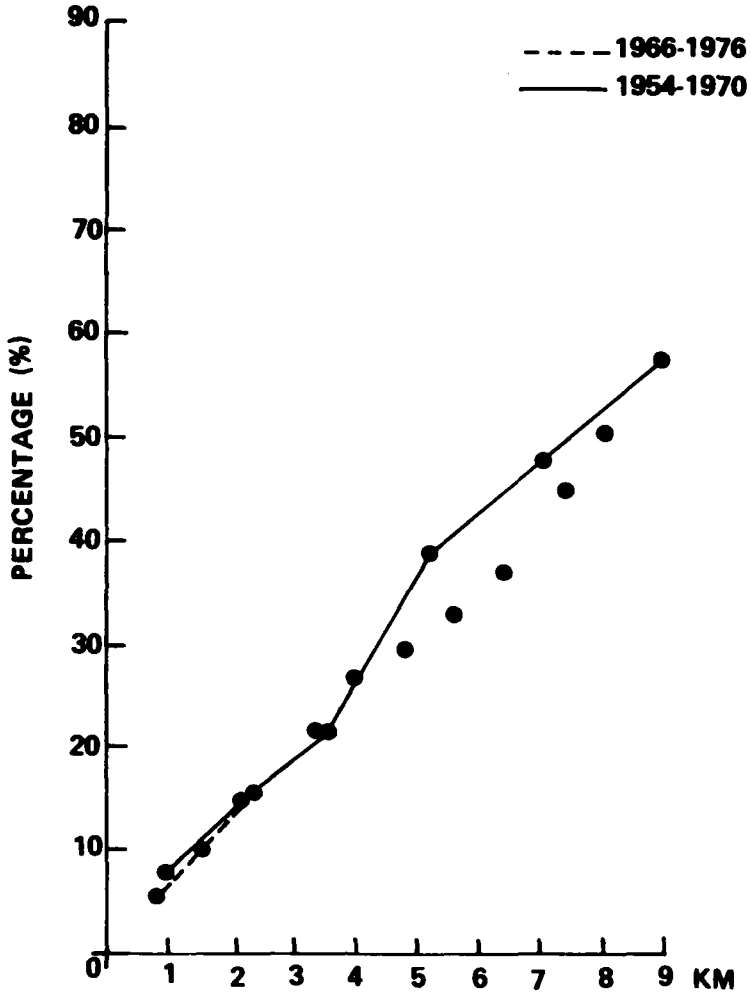

Figure B-10. Cumlative distribution of visibility observations at Sembach, hours 6-8.

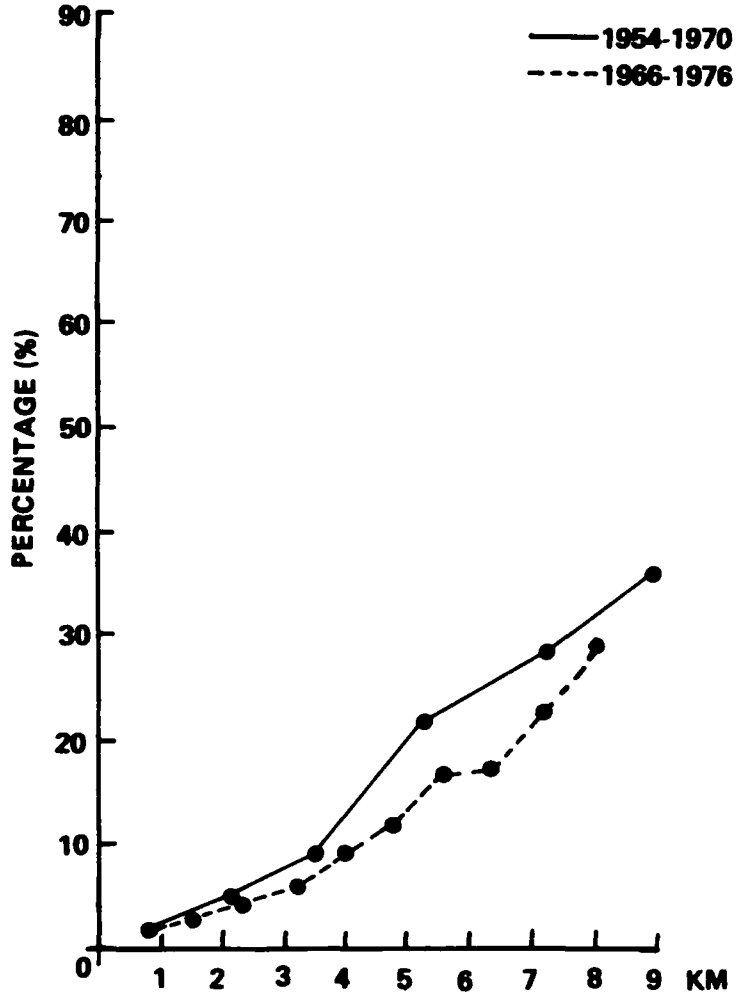

Figure B-11. Cumulative distribution of visibility observations at Sembach, hours 18-20.

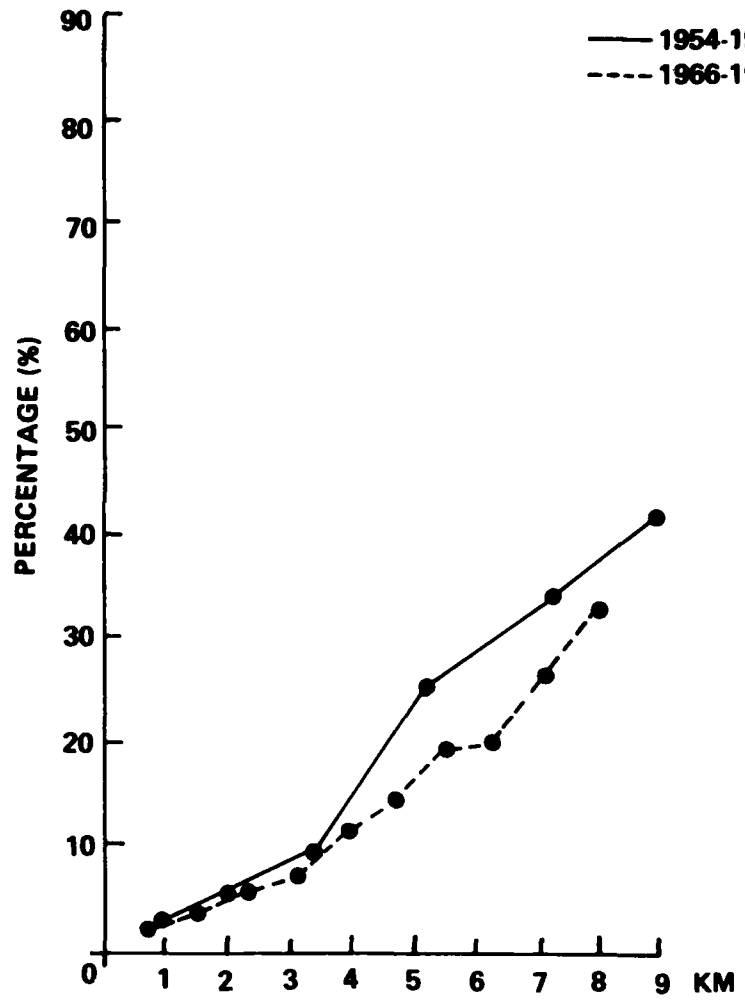

Figure B-12. Cumulative distribution of visibility observations at Sembach, hours 21-23.

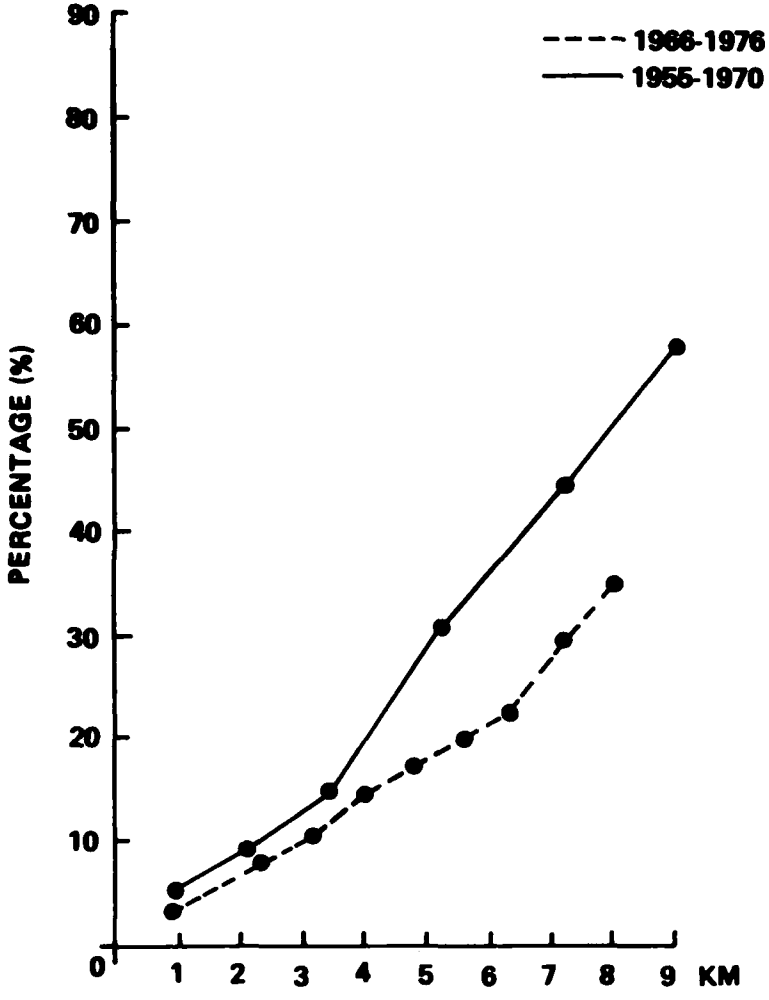

Figure B-13. Cumulative distribution of visibility observations at Heidelberg, hours 3-5.

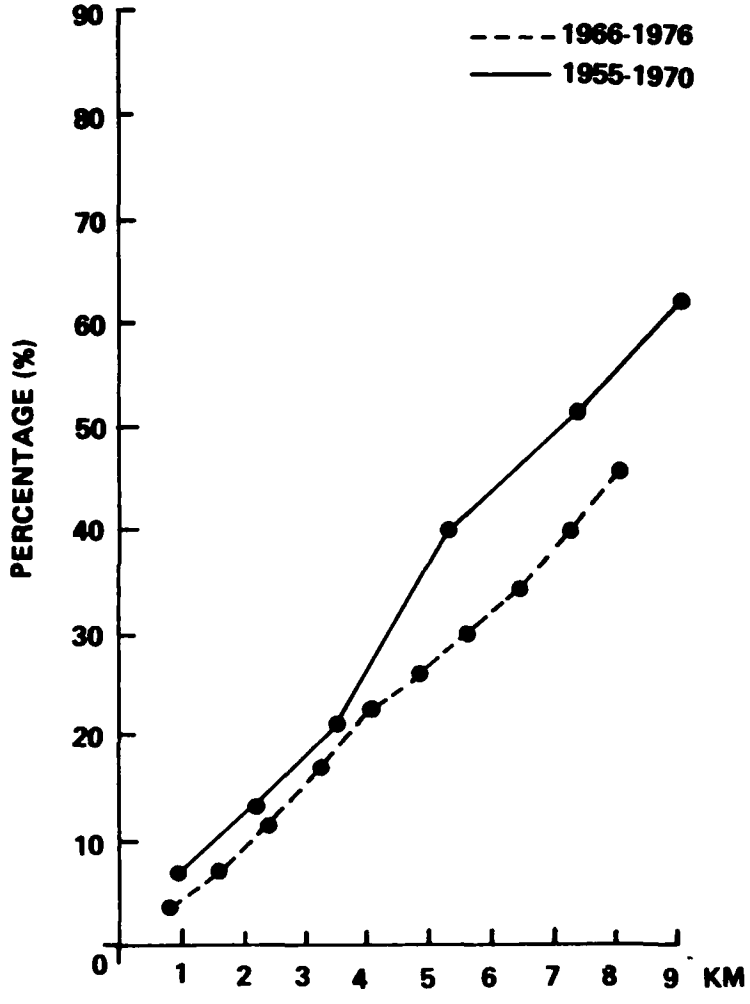

Figure B-14. Cumulative distribution of visibility observations at Heidelberg, hours 6-8.

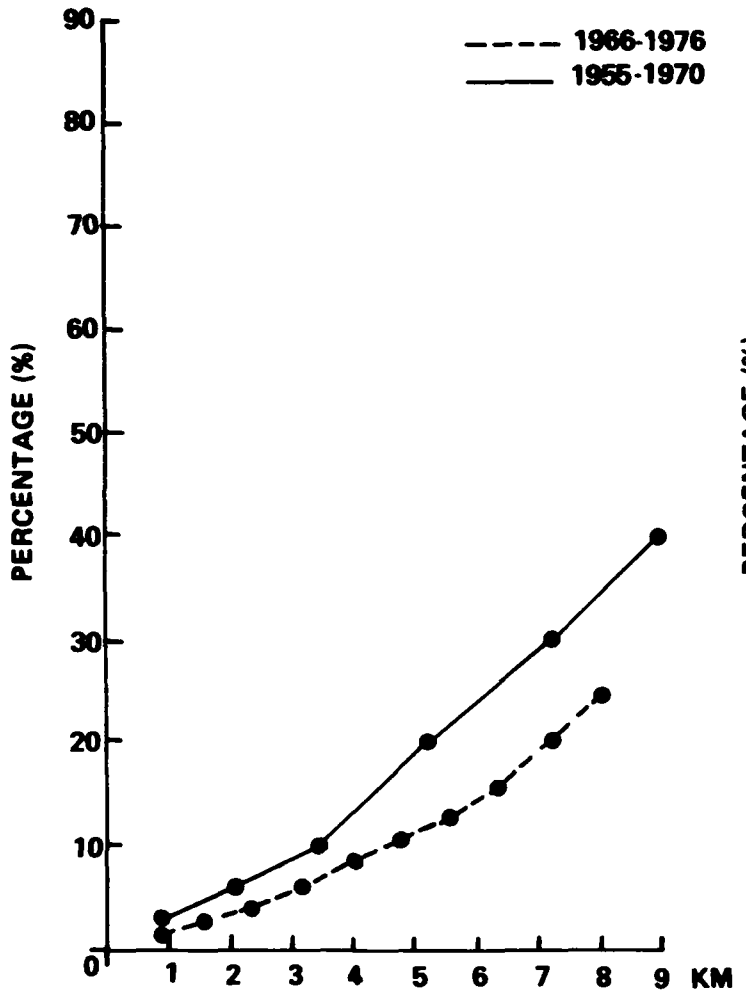

Figure B-15. Cumulative distribution of visibility observations at Heidelberg, hours 18-20.

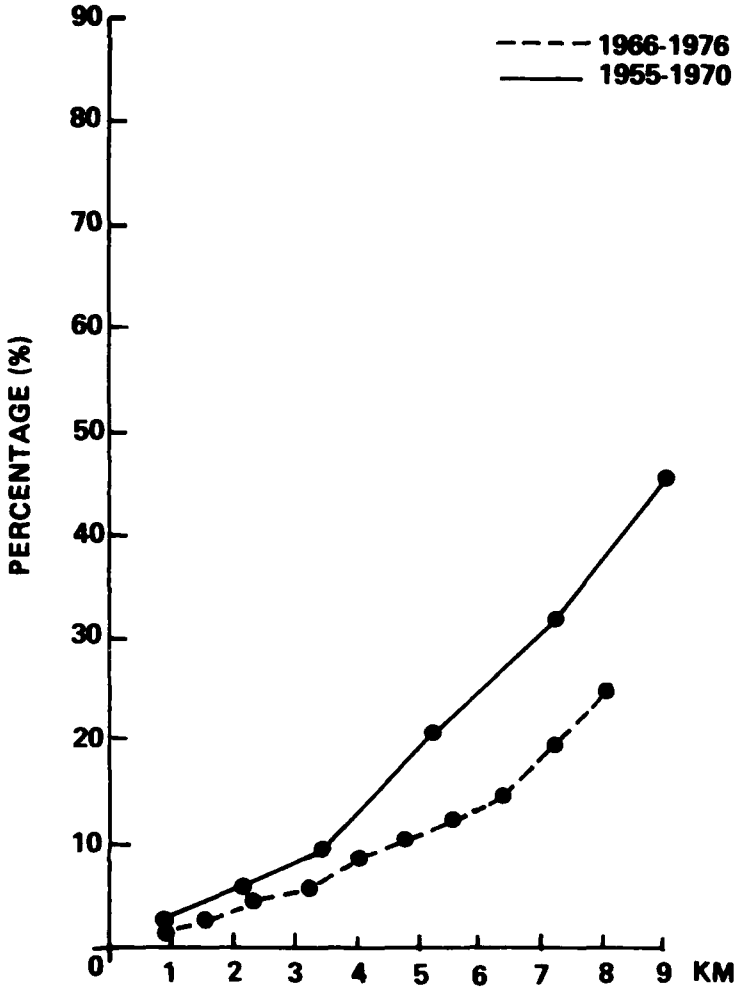

Figure B-16. Cumulative distribution of visibility observations at Heidelberg hours 21-23.

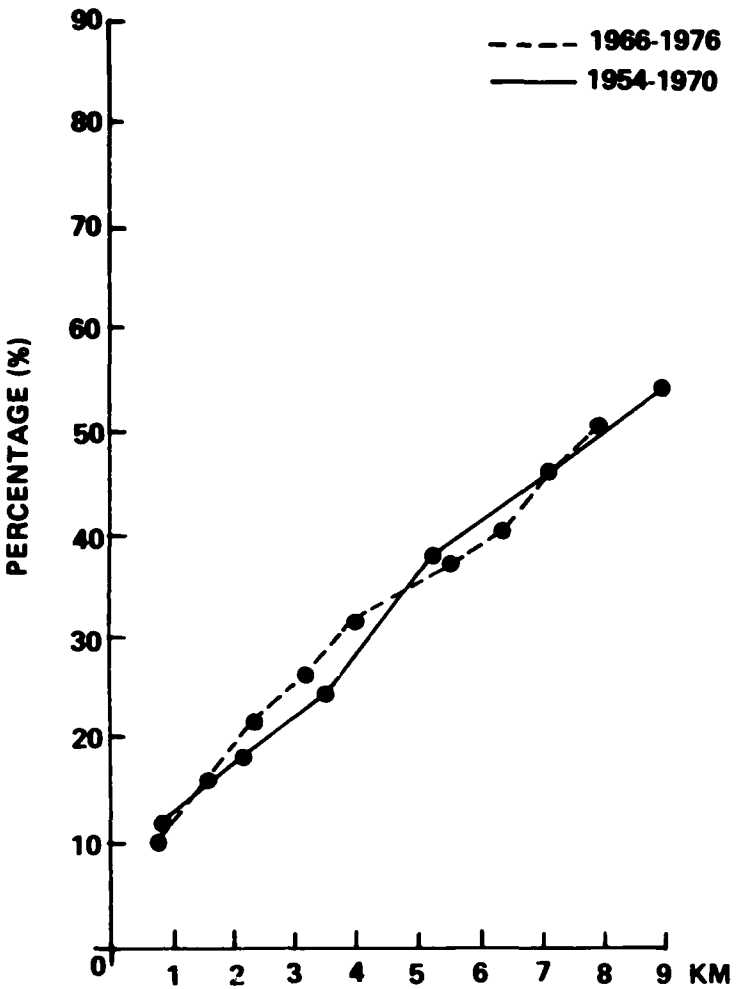

Figure B-17. Cumulative distribution of visibility observation at Hahn, hours 3-5.

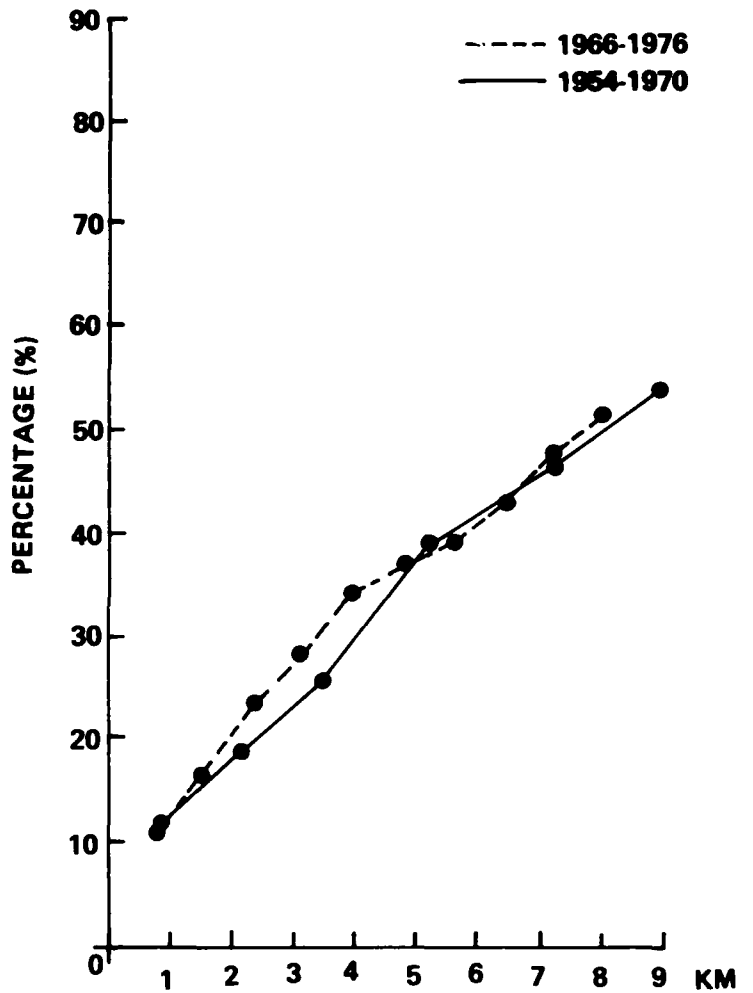

Figure B-18. Cumulative distribution of visibility observation at Hahn, hours 6-8.

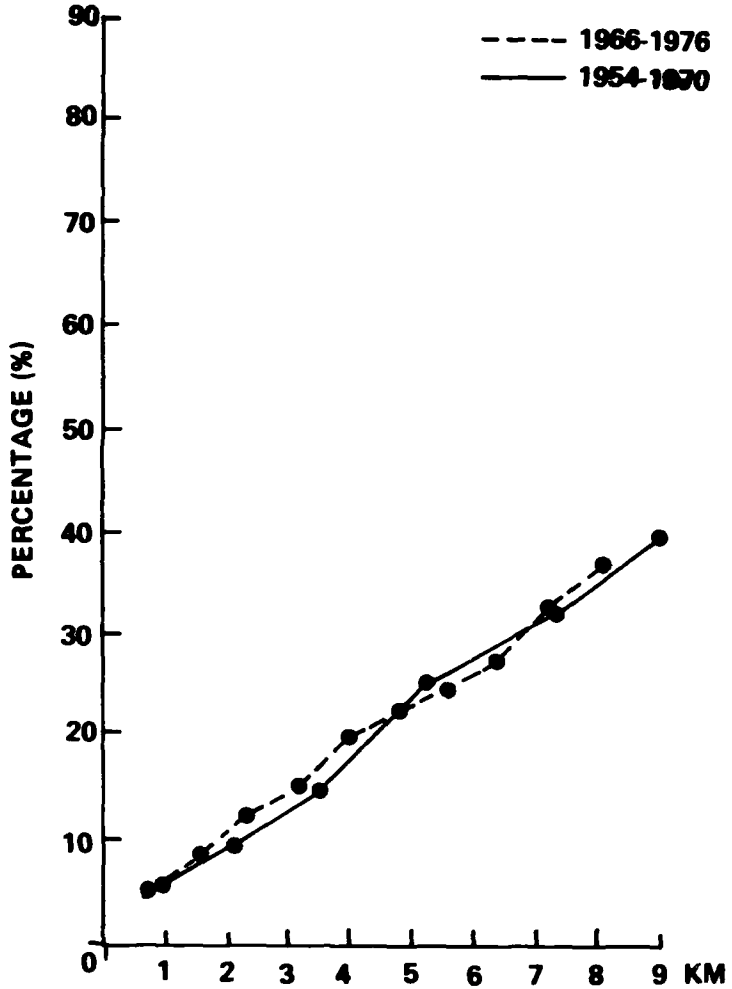

Figure B-19. Cumulative distribution of visibility observations at Hahn, hours 18-20.

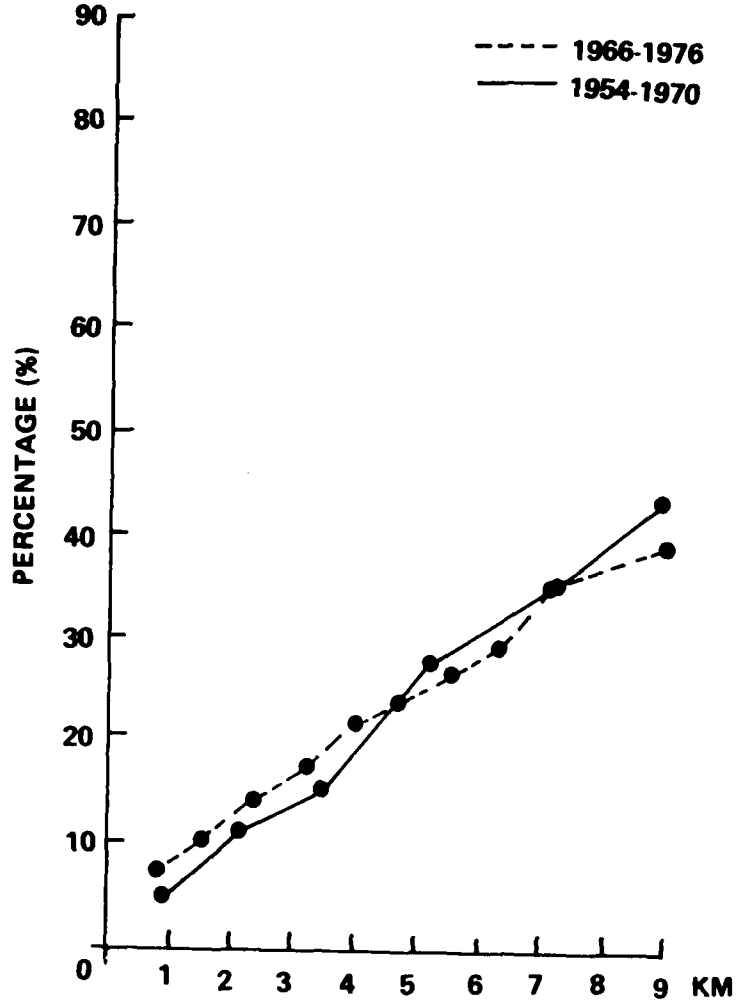

Figure B-20. Cumulative distribution of visibility observations at Hahn, hours 21-23.

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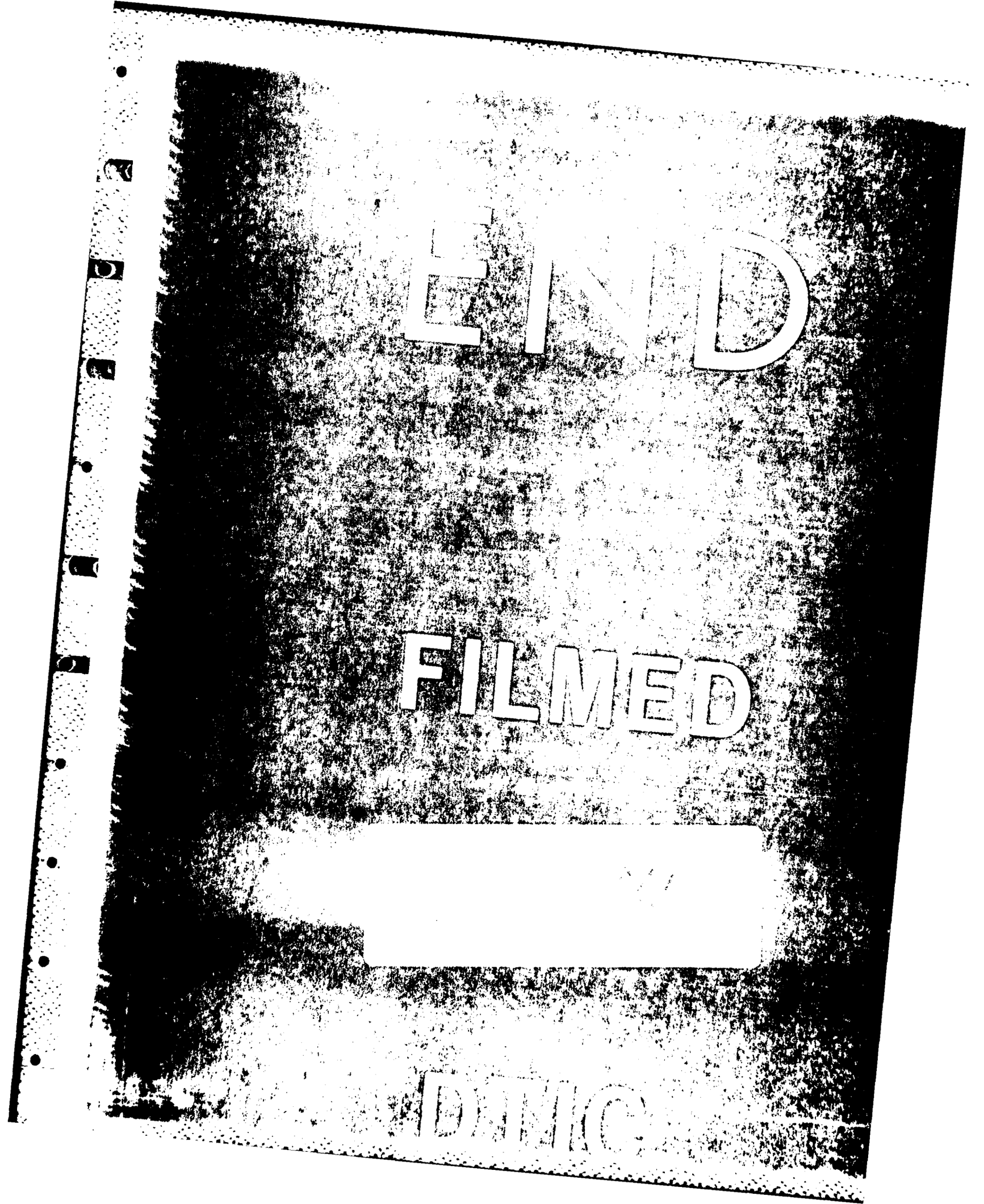
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